



## Indian Health Focus

# *Injuries*



1998-99

U.S. Department of Health and Human Services

Indian Health Service

Office of Public Health

Office of Program Support

*Program Statistics Team*

MH02D5324





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## *Injuries*

1998-99

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# INTRODUCTION



The Indian Health Service (IHS) is an agency of the Department of Health and Human Services. The IHS goal is to assure that comprehensive, culturally acceptable personal and public health services are available and accessible to American Indian and Alaska Native people. The mission of the IHS, in partnership with American Indian and Alaska Native people, is to raise their physical, mental, social, and spiritual health to the highest level.

The IHS has carried out its responsibilities through developing and operating a health services delivery system designed to provide a broad-spectrum program of preventive, curative, rehabilitative, and environmental services. This system integrates health services delivered directly through IHS facilities, purchased by IHS through contractual arrangements with providers in the private sector, and delivered through Tribally-operated programs and urban Indian health programs.

The IHS is concerned with the various health problems affecting American Indians and Alaska Natives. The IHS presents an overview of the health status of Indians in its annual publications, *Trends in Indian Health* and *Regional Differences in Indian Health*. However, IHS recognizes that there are segments and conditions of the Indian population that require special attention, such as infants, youth, women, the elderly, and injuries. This publication examines the major category of injuries and poisonings and its subgroups—accidents, suicides, homicides, firearm injuries, and other injuries. This publication refers to “accidents” as “unintentional injuries” to be consistent with the terminology used by the IHS Injury Prevention Program. The content is based on data published in the 1998-99 *Trends in Indian Health* and 1998-99 *Regional Differences in Indian Health*, but also includes some new charts and tables.

The population of interest for this publication is American Indians and Alaska Natives residing in the IHS service area. The IHS service area comprises the geographic areas in which IHS has responsibility (counties on and near reservations). Approximately 60 percent of American Indians and Alaska Natives in the U.S. reside in the IHS service area. In 1999, there were 1.49 million Indians in the IHS service area compared to 2.44 million in the entire U.S.



# Summary of Data Shown

Injuries and poisonings are a major problem in Indian country. This is apparent from analyzing the major category of injury and poisoning, as well as its sub-groups: unintentional injuries, suicides, homicides, firearm injuries, and other injuries.

Unintentional injuries is the third leading cause of death for the Indian population, overall, and for Indian females. It is second for Indian males and fourth for U.S. All Races and White males. Unintentional injuries is not among the top five leading causes of death for U.S. All Races or White females. Unintentional injuries also appears high on the list of leading causes of death for selected Indian age groups. It is fourth for Indian infants, first for age groups between 1 through 44, third for 45 to 54 years, and fourth for 55 to 64 years.

The Indian age-adjusted death rate due to injury and poisoning (unintentional injury, suicide, homicide, firearm injury, and other injury) has decreased 53 percent since 1972-74 (unadjusted rates). Despite this improvement, the 1994-96 Indian rate (129.7) is still 2.5 times the 1995 U.S. All Races rate (52.2) and 165 percent greater than the 1995 U.S. White rate (49.0). The rate varies considerably among the IHS Areas. The highest IHS Area rate (Alaska, 185.1) is over 3.5 times the U.S. All Races rate (53.8). Even the lowest IHS Area rate (California, 70.9) is 36 percent greater than the U.S. All Races rate. Indian males are much more likely to die from injury and poisoning than Indian females. Indian male rates are more than triple the Indian female rates for age groups 25 through 44. Indian male rates are more than double the U.S. All Races male rates for age groups through 64 years.

The 1994-96 Indian rate has been adjusted for misreporting of Indian race on state death certificates.

The Indian age-adjusted unintentional injury death rate has decreased 57 percent since 1972-74 (unadjusted rates). In 1972-74, the Indian rate (188.0) was 3.6 times the 1973 U.S. All Races rate (51.7) and 3.8 times the 1973 U.S. White rate (49.5). For 1994-96, the Indian rate (92.6) is over 3 times the 1995 U.S. All Races rate (30.5) and 210 percent greater than the U.S. White rate (29.9). The Navajo, Alaska, Aberdeen, and Bemidji IHS Areas each have a rate that exceeds 120.0. These rates are about 3 times the lowest IHS Area rate (California, 44.1), and about 4 times the U.S. All Races rate (30.5). Excluding the very elder population (75 years and older), the highest Indian male rate (181.1) occurs in the 35 to 44 year age group. This is 3.0 times the comparable peak for the U.S. All Races male population (60.1 for 65 to 74 years) and 2.6 times the comparable peak for the Indian female population (70.4 for 25 to 34 years). The Indian female peak is in turn 2.1 times the comparable peak for the U.S. All Races female population (32.9 for 65 to 74 years). The 1994-96 Indian rate has been adjusted for misreporting of Indian race on state death certificates.

The Indian male age-adjusted motor vehicle unintentional injury death rate has decreased 59 percent since 1972-74 (unadjusted rates). For 1994-96, the Indian male rate (72.5) is 69 percent greater than the 1995 U.S. All Races male rate (22.7) and the U.S. White male rate (22.6). The Indian female age-adjusted motor vehicle unintentional injury death rate has decreased 49 percent since 1972-74 (unadjusted rates).



## Summary of Data Shown

For 1994-96, the Indian female rate (36.4) is 264 percent greater than the 1995 All Races female rate (10.0) and 253 percent greater than the White female rate (10.3). The 1994-96 Indian rate has been adjusted for misreporting of Indian race on state death certificates.

During the period since 1972-74, the Indian age-adjusted suicide death rate reached a peak in 1975-77 (22.5 unadjusted) and a low in 1984-86 (16.0 unadjusted). The Indian adjusted rate in 1994-96 (17.3) is 8 percent greater than that low. It is also 54 percent greater than the 1995 U.S. All Races rate (11.2) and 45 greater than the 1995 U.S. White rate (11.9). The rate is the highest in Alaska among the IHS Areas. The Alaska rate (41.9) is 41 percent greater than the next highest IHS Area rate (Aberdeen, 29.7) and nearly 4 times the lowest IHS Area rate (Nashville, 11.0). The highest Indian male suicide death rates occur in the 25 to 34 (66.7) and 15 to 24 (53.5) year old age groups. The peaks for Indian females are reversed in terms of age groups (13.4 for 15-24 years and 11.5 for 25-34 years, but these Indian female rates are about one-fifth the Indian male rates. The U.S. All Races male suicide death rates are highest for 85 years and older (63.1) and 75 to 84 years (44.8). For U.S. All Races females, the highest rates occur in the 10 year age group between 35 to 54 years (6.5 to 6.7). The 1994-96 Indian rate has been adjusted for misreporting of Indian race on state death certificates.

The Indian age-adjusted homicide death rate has decreased 44 percent since 1972-74 (unadjusted rates). The 1994-96 Indian rate (15.3) is 63 percent greater than the 1995 U.S. All Races rate (9.4), but 178 percent greater than the 1995 U.S. White rate (5.5). The Tucson Area has the highest IHS Area rate, 29.0, which is more than triple the U.S. All Races rate (9.4). The Phoenix, Billings, and Bemidji Areas

have rates that are more than double the U.S. All Races rate. The lowest IHS Area rate occurs in Nashville (7.9). The highest Indian male homicide death rates occur in the 10 year age group between 15 to 44 years (36.5 to 40.0). This is also true for U.S. All Races males (14.6 to 34.0). However, for both Indian females and U.S. All Races females, the highest rate occurs in the under 1 year age group (11.3 and 7.2, respectively). The 1994-96 Indian rate has been adjusted for misreporting of Indian race on state death certificates.

The Indian age-adjusted firearm injury death rate has decreased 35 percent since 1978-80 (unadjusted rates). Both the U.S. All Races and White rates have decreased since 1979 (5 percent and 7 percent, respectively). The 1994-96 Indian rate (18.9) is 36 percent greater than the 1995 U.S. All Races rate (13.9) and 67 percent greater than the 1995 U.S. White rate (11.3). The rate varies considerably among the IHS Areas. The highest Area rate (Alaska, 40.0) is nearly 4 times the lowest Area rate (Navajo, 10.5). The Indian male age-adjusted firearm injury death rate is highest for the 15 to 24 year age group (62.6). This is nearly 6 times the peak for Indian females (10.9) which also occurs in the same age group. The U.S. All Races male rate also is highest for this age group (47.7); it is 24 percent less than the Indian male rate. The highest U.S. All Races female rate (6.0) also occurs in this age group. The 1994-96 Indian rate has been adjusted for misreporting of Indian race on state death certificates.

Problem drinking is associated with injuries. For 1994-96 the Indian population has an age-adjusted alcoholism death rate (48.7) that is 7.3 times the U.S. All Races rate (6.7) and 7.9 times the U.S. White rate (6.2). Between 1979-81 and 1985-87,



## Summary of Data Shown

the Indian rate decreased 47 percent. However, since 1985-87, it has increased 25 percent (unadjusted rates). The Aberdeen Area rate (108.7) is over 16 times the U.S. All Races rate. It is 51 percent greater than the second highest IHS Area rate (Alaska and Phoenix, 72.1). The lowest IHS Area rate occurs in Oklahoma (21.7), but this is still 3.2 times the U.S. All Races rate. The highest Indian male alcoholism death rate (182.6) occurs in the 55 to 64 year age group. This is 5 times the U.S. All Races male peak rate (36.4 for 55 to 64 years). The Indian female highest rate (97.8 for 45 to 54 years) is 46 percent less than the Indian male peak rate, but it is over 10 times the U.S. All Races female peak rate (9.5 for 55 to 64 years). The 1994-96 Indian rate has been adjusted for misreporting of Indian race on state death certificates.

Injuries and poisonings place a large burden on IHS and Tribal direct and contract facilities. Injury and poisoning is the fourth leading cause of ambulatory medical visits for Indian male patients, all ages, as well as for age groups 5 through 24 years. Injury and poisoning is the fourth leading cause of hospitalization for Indian patients, all ages. It is third for Indian

male patients and fifth for Indian female patients. Injury and poisoning is also a major leading cause of hospitalization for specific Indian patient age groups. It is second for age groups 5 through 24 years, third for 1 to 4 and 25 to 44 years, and fifth for 45 to 54 years. However, the number of discharges for injury and poisoning from IHS and Tribal direct and contract hospitals has been on the decline. In 1997, the number of such discharges were 68 percent of what they were in 1987.

Eighteen percent of the expenses for IHS-administered contract health services (CHS) during 1994-97 were associated with injuries and poisonings claims. During this period, the average cost of a CHS inpatient case for injuries and poisonings was \$11,305 and for an outpatient case was \$570.



# Sources and Limitations of Data

## POPULATION STATISTICS

The IHS service population consists of American Indians and Alaska Natives identified to be eligible for IHS services. IHS service population estimates are based on official U.S. Bureau of the Census county data. The Census Bureau enumerates those individuals who identify themselves as being American Indian, Eskimo or Aleut. The IHS service population is estimated by counting those American Indians, Eskimos, and Aleuts (as identified during the census) who reside in the geographic areas in which IHS has responsibilities ("on or near" reservations, i.e., contract health service delivery areas). These people may or may not use IHS services.

IHS service populations between census years (e.g., 1980 and 1990) are estimated by a smoothing technique in order to show a gradual transition between census years. IHS service populations beyond the latest census year (1990) are projected through linear regression techniques, using the most current 10 years of Indian birth and death data provided by the National Center for Health Statistics. The natural change (estimated number of births minus estimated number of deaths) is applied to the latest census enumeration.

IHS user population estimates are based on data from the IHS Patient Registration System. Patients who receive direct or contract health services from IHS or Tribally-operated programs are registered in the Patient Registration System. Those registered Indian patients that had at least one direct or contract inpatient stay, ambulatory

medical visit, or dental visit during the last 3 years are defined as users. IHS user population figures are used for calculating IHS patient care rates. In contrast, IHS service population figures are used in calculating Indian vital event rates since State birth and death certificates do not provide information on use of IHS services.

The social and economic data contained in this publication are from the 1990 Census. They reflect the characteristics of persons that self-identified as American Indian, Eskimo, or Aleut during the 1990 Census.

## VITAL EVENT STATISTICS

American Indian and Alaska Native vital event statistics are derived from data furnished annually to the IHS by the National Center for Health Statistics (NCHS). Vital event statistics for the U.S. population were derived from data appearing in various NCHS publications, as well as from some unpublished data from NCHS. NCHS obtains birth and death records for all U.S. residents from the State departments of health, based on information reported on official State birth and death certificates. The records NCHS provides IHS contain the same basic demographic items as the vital event records maintained by NCHS for all U.S. residents, but with names, addresses, and record identification numbers deleted. It should be noted that Tribal identity is not recorded on these records. Tabulations of vital events for this publication are by place of residence.



## Sources and Limitations of Data

It is known that there is misreporting of Indian race on State death certificates, especially in areas distant from traditional Indian reservations. In order to determine the degree and scope of the misreporting, IHS conducted a study utilizing the National Death Index (NDI) maintained by the NCHS. The study involved matching IHS patient records of those patients who could have died during 1986 through 1988 with all death records of U.S. residents for 1986 through 1988 as contained on the NDI. The results were published in a document entitled, *Adjusting for Miscoding of Indian Race on State Death Certificates*, November 1996. The study revealed that on 10.9 percent of the matched IHS-NDI records, the race reported for the decedent was other than American Indian or Alaska Native. The percentage of records with inconsistent classification of race ranged from 1.2 percent in the Navajo Area to 28.0 and 30.4 percent in the Oklahoma and California Areas, respectively.

The results of the NDI study provide sufficient numbers to calculate adjustments for each IHS Area, IHS overall, and selected age groups. In addition to these adjustments based on the study findings, IHS assumed the following; a) the results from 1986-88 apply to other years, b) IHS age-group adjustments applied also to each Area, and c) the Area adjustments applied to the causes of death used in this publication (i.e., if an Area's total deaths needed to be increased by 10 percent, then the deaths for each cause of death would also increase by this same rate). These assumptions cannot be statistically supported by the results of the study. However, IHS felt that it was necessary to adjust all of the death rates in this publication to provide a meaningful and comprehensive look at health status. IHS also believes that they are reasonable adjustments.

These NDI adjustments were used for the first time in the 1997 edition of this publication. Both unadjusted and adjusted information is shown, as applicable. The adjustments were applied to the results obtained from using an unadjusted death file.

### PATIENT CARE STATISTICS

Patient care statistics are derived from IHS reporting systems. There are four main patient care reporting systems. The Monthly Inpatient Services Report is a patient census report that is prepared by each IHS hospital. It indicates the number of discharges and days by type of service (e.g., adult, pediatric, obstetric, newborn), and is used for the direct inpatient workload statistics. The Inpatient Care System is the source of IHS hospital inpatient data pertaining to various patient characteristics (age, sex, principal diagnoses, other diagnoses, community of residence, etc.). The data are collected daily, one record per discharge. The Contract Care System is the source of similar contract hospital inpatient data.

The Ambulatory Patient Care System is the source of data pertaining to the number of ambulatory medical visits at IHS facilities by various patient characteristics (age, sex, clinical impression, community of residence, etc.). The data are collected daily, one record per ambulatory medical visit. The Contract Care System is the source of similar contract ambulatory medical visit data.





# Sources of Additional Information

Additional Indian health status information can be obtained from the IHS Program Statistics Team. Specific responsibilities are as follows:

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[http://www.ihs.gov/NonMedicalPrograms/IHS\\_Stats/](http://www.ihs.gov/NonMedicalPrograms/IHS_Stats/)

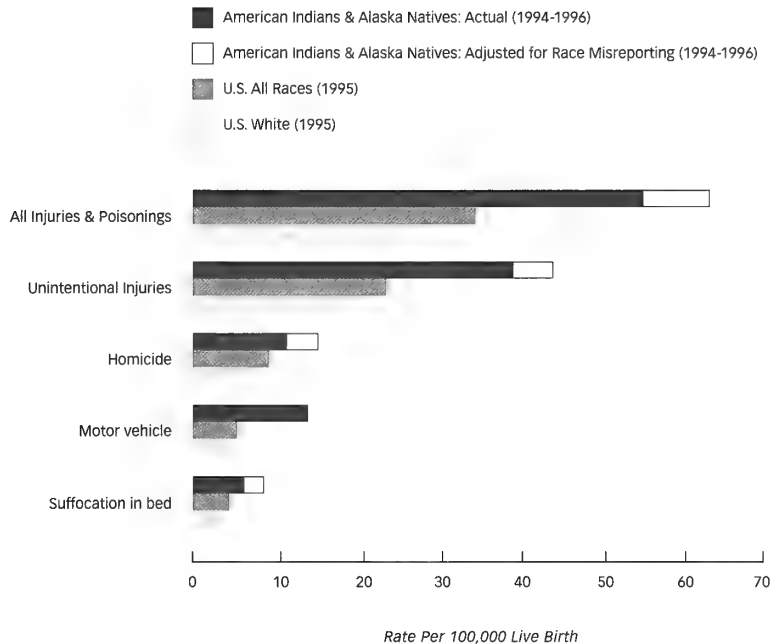


# Charts and Tables

## CHART 1

### Infant Mortality Rates by Injury and Poisoning Cause

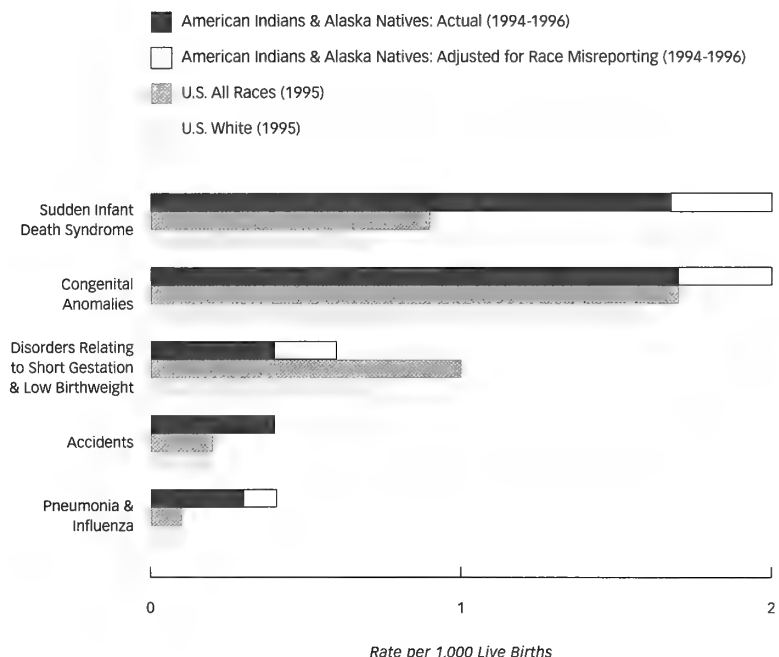
Indian infants die from injuries and poisonings at a rate that is 2.1 times the U.S. All Races rate. High causes of Indian infant injury and poisoning deaths include homicide, motor vehicle, and suffocation in bed.



## CHART 2

### Leading Causes of Infant Deaths (Births to Under 1 Year)

Unintentional injuries is the fourth leading cause of infant deaths among Indians. For every 100 Indian infant deaths, about 4 deaths are attributable to unintentional injuries. Unintentional injuries is not among the top five leading causes of infant deaths for either the U.S. All Races or White populations. These Indian rates are adjusted for misreporting of Indian deaths on state death certificates.



**TABLE 1****Infant Mortality Rates by Injury and Poisoning Cause**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Live Births)

Cause of Death	American Indian & Alaska Native Number		Rate <sup>1</sup>		U.S. All Races Rate	U.S. White Rate	Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Actual	Adj <sup>2</sup>	Actual	Adj <sup>2</sup>			U.S. All Races	U.S. White
All Injuries and Poisonings	54	62	54.5	62.6	29.7	24.0	2.1	2.6
Unintentional Injuries	39	43	39.4	43.4	20.3	17.0	2.1	2.6
Motor vehicle	12	12	12.1	12.1	4.6	4.3	2.6	2.8
Suffocation in bed	6	8	6.1	8.1	3.8	3.3	2.1	2.5
Accidental hanging	2	4	2.0	4.0	1.1	1.4	3.6	2.9
Ingestion of food or other object causing suffocation	3	3	3.0	3.0	2.1	1.7	1.4	1.8
Drowning	1	2	1.0	2.0	1.5	1.3	1.3	1.5
Fires/burns	3 <sup>3</sup>	2 <sup>3</sup>	3.0	2.0	1.7	1.2	1.2	1.7
Suffocation in plastic bag	2	2	2.0	2.0	0.4	0.3	5.0	6.7
Falls	1	1	1.0	1.0	0.6	0.4	1.7	2.5
Hunger, thirst, exposure, neglect	1	1	1.0	1.0	0.2	0.1	5.0	10.0
Other unintentional injuries	8	8	8.1	8.1	12.2	9.8	0.7	0.8
Homicide	11	16	11.1	16.2	8.0	5.9	2.0	2.7
Other Injuries and Poisonings	4 <sup>3</sup>	3 <sup>3</sup>	4.0	3.0	1.5	1.1	2.0	2.7

<sup>1</sup> Rates based on a small number of deaths should be interpreted with caution.

<sup>2</sup>

Adjusted to compensate for misreporting of American Indian race on State death certificates.

<sup>3</sup> There was one more infant death due to fires/burns and other injuries and poisonings on the unadjusted mortality file (1994-1996) than on the adjusted (linked birth/infant death record) file (1994-1996).

**TABLE 2****Leading Causes of Infant Deaths by Age**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 1,000 Live Births)

Cause of Death	American Indian & Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Number		Rate				U.S. All Races	U.S. White
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>				
Total Infant Deaths								
All Causes	753	922	7.6	9.3	7.6	6.3	1.2	1.5
Sudden infant death syndrome	166	202	1.7	2.0	0.9	0.7	2.2	2.9
Congenital anomalies	168	196	1.7	2.0	1.7	1.6	1.2	1.3
Disorders relating to short gestation and low birth weight	43	57	0.4	0.6	1.0	0.7	0.6	0.9
Accidents	39	43	0.4	0.4	0.2	0.2	2.0	2.0
Pneumonia and influenza	32	39	0.3	0.4	0.1	0.1	4.0	4.0
Respiratory distress syndrome	24	35	0.2	0.4	0.4	0.3	1.0	1.3
Newborn affected by								
complications of placenta, cord, & membranes	28	30	0.3	0.3	0.2	0.2	1.5	1.5
Newborn affected by maternal complications of pregnancy	12	19	0.1	0.2	0.3	0.3	0.7	0.7
Homicide	11	16	0.1	0.2	0.1	0.1	2.0	2.0
Infections specific to the perinatal period	10	14	0.1	0.1	0.2	0.2	0.5	0.5
All other causes	220	271						

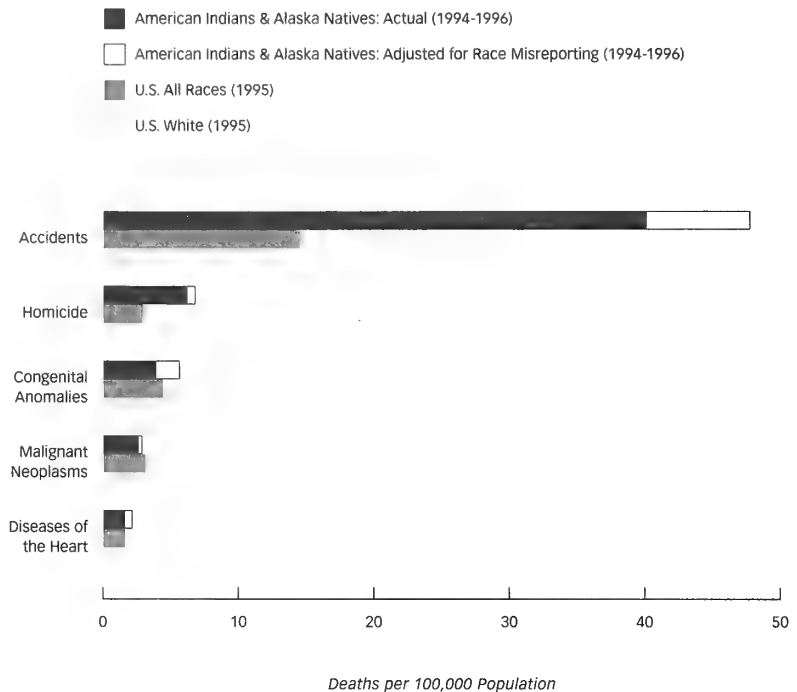
<sup>1</sup>Adjusted to compensate for misreporting of Indian race on death certificates.

**Note:** Causes of death are listed based upon the order of adjusted number of deaths

### CHART 3

#### Death Rates, Leading Causes: Ages 1 to 4 Years

Unintentional injuries is the leading cause of death for children, 1 to 4 years of age, in the Indian population as well as the U.S. All Races and White populations. Almost one-half of all Indian deaths in this age group are caused by unintentional injuries. Homicide is the second leading cause of death for Indians in this age group, while it is fourth for U.S. All Races and Whites. These Indian rates are adjusted for misreporting of Indian deaths on state death certificates.



### TABLE 3

#### Ten Leading Causes of Death for Decedents 1 to 4 Years of Age

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

Cause of Death	American Indian & Alaska Native			U.S. All Races Rate	U.S. White Rate	Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Actual	Adj <sup>1</sup>	Rate			U.S. All Races	U.S. White
All Causes	297	353	76.8	40.6	35.1	2.2	2.6
Accidents	155	183	40.1	14.5	13.3	3.3	3.6
Motor vehicle	69	76	17.9	5.2	4.9	3.8	4.0
Other accidents	86	107	22.3	9.2	8.4	3.0	3.3
Homicide and legal intervention	24	25	6.2	2.9	1.9	2.2	3.4
Congenital anomalies	15	22	3.9	4.4	4.1	1.3	1.4
Malignant neoplasms	10	11	2.6	3.1	3.1	0.9	0.9
Diseases of the heart	6	8	1.6	1.6	1.2	1.3	1.8
Pneumonia and influenza	6	7	1.6	1.0	0.7	1.8	2.6
Certain conditions originating in the perinatal period	5	7	1.3	0.6	0.4	3.0	4.5
Chronic obstructive pulmonary diseases and allied conditions	3	3	0.8	0.2	0.2	4.0	4.0
Acute bronchitis and bronchiolitis	2	3	0.5	0.2	0.1	4.0	8.0
Cerebrovascular diseases	2	3	0.5	0.4	0.3	2.0	2.7
All other causes	69	81					

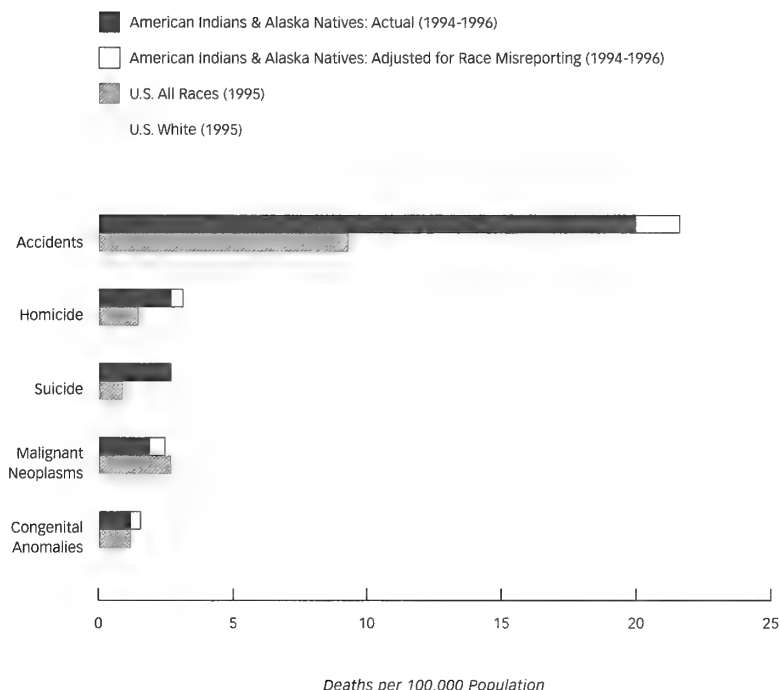
<sup>1</sup> Adjusted to compensate for misreporting of Indian race on state death certificates.

**Note:** Causes of death are listed based upon the order of adjusted number of deaths.

## CHART 4

### Death Rates, Leading Causes: Ages 5 to 14 Years

Unintentional injuries is the leading cause of death for children, 5 to 14 years of age, in the Indian population as well as the U.S. All Races and White populations. Over one-half of all Indian deaths in this age group are caused by unintentional injuries. Homicide and suicide are the second and third leading causes of death for Indians in this age group. For U.S. All Races, homicide is third and suicide is fifth. For U.S. Whites, homicide and suicide are tied for fourth. These Indian rates are adjusted for misreporting of Indian deaths on state death certificates.



## TABLE 4

### Ten Leading Causes of Death for Decedents 5 to 14 Years of Age

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

Cause of Death	American Indian & Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>			U.S. All Races	U.S. White
All Causes	329	366	37.2	41.4	22.5	20.6	1.8	2.0
Accidents	177	191	20.0	21.6	9.3	8.8	2.3	2.5
Motor vehicle	94	103	10.6	11.7	5.4	5.3	2.2	2.2
Other accidents	83	88	9.4	10.0	3.9	3.5	2.6	2.9
Homicide and legal intervention	24	29	2.7	3.3	1.5	1.0	2.2	3.3
Suicide	24	24	2.7	2.7	0.9	1.0	3.0	2.7
Malignant neoplasms	17	22	1.9	2.5	2.7	2.7	0.9	0.9
Congenital anomalies	11	14	1.2	1.6	1.2	1.1	1.3	1.5
Diseases of the heart	6	9	0.7	1.0	0.8	0.6	1.3	1.7
Pneumonia and influenza	6	9	0.7	1.0	0.3	0.3	3.3	3.3
Septicemia	4	4	0.5	0.5	0.1	0.1	5.0	5.0
Chronic obstructive pulmonary diseases and allied conditions	3	4	0.3	0.5	0.4	0.2	1.3	2.5
Meningococcal infection	3	3	0.3	0.3	0.1	0.1	3.0	3.0
All other causes	54	57						

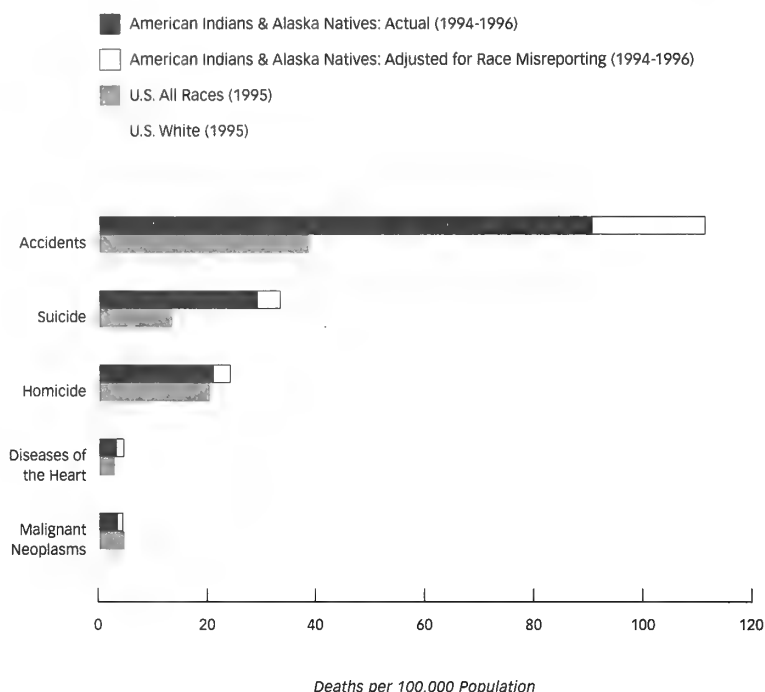
<sup>1</sup> Adjusted to compensate for misreporting of Indian race on state death certificates.

**Note:** Causes of death are listed based upon the order of adjusted number of deaths.

## CHART 5

### Death Rates, Leading Causes: Ages 15 to 24 Years

Unintentional injuries is the leading cause of death for persons, 15 to 24 years of age, in the Indian population as well as the U.S. All Races and White populations. Over one-half of all Indian deaths in this age group are caused by unintentional injuries. Suicide and homicide are the second and third leading causes of death for Indians and U.S. Whites in this age group. For U.S. All Races, the order is reversed. These Indian counts are adjusted for misreporting of Indian deaths on state death certificates.



## TABLE 5

### Ten Leading Causes of Death for Decedents 15 to 24 Years of Age

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

Cause of Death	American Indian & Alaska Native		Rate		U.S. All Races Rate	U.S. White Rate	Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Number Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>			U.S. All Races	U.S. White
All Causes	1,191	1,433	163.3	196.5	95.3	84.3	2.1	2.3
Accidents	661	817	90.6	112.0	38.5	40.2	2.9	2.8
Motor vehicle	500	629	68.6	86.2	29.5	31.1	2.9	2.8
Other accidents	161	188	22.1	25.8	9.0	9.1	2.9	2.8
Suicide	212	247	29.1	33.9	13.4	14.0	2.5	2.4
Homicide and legal intervention	153	176	21.0	24.1	20.3	10.5	1.2	2.3
Diseases of the heart	23	31	3.2	4.3	2.9	2.2	1.5	2.0
Malignant neoplasms	25	28	3.4	3.8	4.6	4.6	0.8	0.8
Congenital anomalies	6	7	0.8	1.0	1.3	1.2	0.8	0.8
Cerebrovascular diseases	5	5	0.7	0.7	0.5	0.4	1.4	1.8
Pneumonia and influenza	4	5	0.5	0.7	0.6	0.5	1.2	1.4
Human immunodeficiency virus (HIV) infection	4	5	0.5	0.7	1.8	1.0	0.4	0.7
Septicemia	4	4	0.5	0.5	0.2	0.2	2.5	2.5
All other causes	94	108						

<sup>1</sup> Adjusted to compensate for misreporting of Indian race on state death certificates.

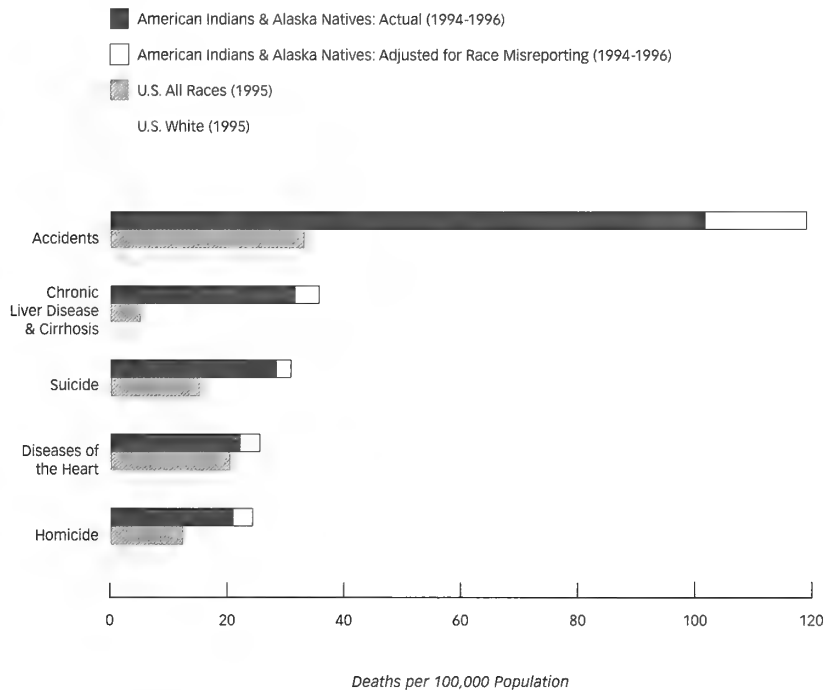
**Note:** Causes of death are listed based upon the order of adjusted number of deaths.



## CHART 6

### Death Rates, Leading Causes: Ages 25 to 44 Years

Unintentional injuries is the leading cause of death for persons, 25 to 44 years of age, in the Indian population as well as the U.S. All Races and White populations. Almost one-third of all Indian deaths in this age group are caused by unintentional injuries. Suicide and homicide are the third and fifth leading causes of death for Indians in this age group. For U.S. All Races and Whites, suicide is fifth and homicide is sixth. These Indian rates are adjusted for misreporting of Indian deaths on state death certificates.



## TABLE 6

### Ten Leading Causes of Death for Decedents 25 to 44 Years of Age

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

Cause of Death	American Indian & Alaska Native		U.S.		U.S.		Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Number	Rate	Number	Rate	Number	Rate	U.S. All Races	U.S. White
All Causes	3,848	4,435	316.2	364.4	192.0	165.5	1.9	2.2
Accidents	1,239	1,439	101.8	118.2	33.2	32.3	3.6	3.7
Motor vehicle	745	881	61.2	72.4	17.5	17.3	4.1	4.2
Other accidents	494	558	40.6	45.8	15.6	15.0	2.9	3.1
Chronic liver disease and cirrhosis	384	437	31.6	35.9	5.2	4.9	6.9	7.3
Suicide	346	387	28.4	31.8	15.3	16.4	2.1	1.9
Diseases of the heart	270	310	22.2	25.5	20.5	17.7	1.2	1.4
Homicide and legal intervention	256	293	21.0	24.1	12.4	7.5	1.9	3.2
Malignant neoplasms	238	280	19.6	23.0	26.4	25.2	0.9	0.9
Human immunodeficiency virus (HIV) infection	160	191	13.1	15.7	36.9	26.6	0.4	0.6
Pneumonia and influenza	89	99	7.3	8.1	2.5	2.0	3.2	4.1
Diabetes mellitus	81	92	6.7	7.6	3.0	2.6	2.5	2.9
Cerebrovascular diseases	76	88	6.2	7.2	4.2	3.2	1.7	2.3
All other causes	709	819						

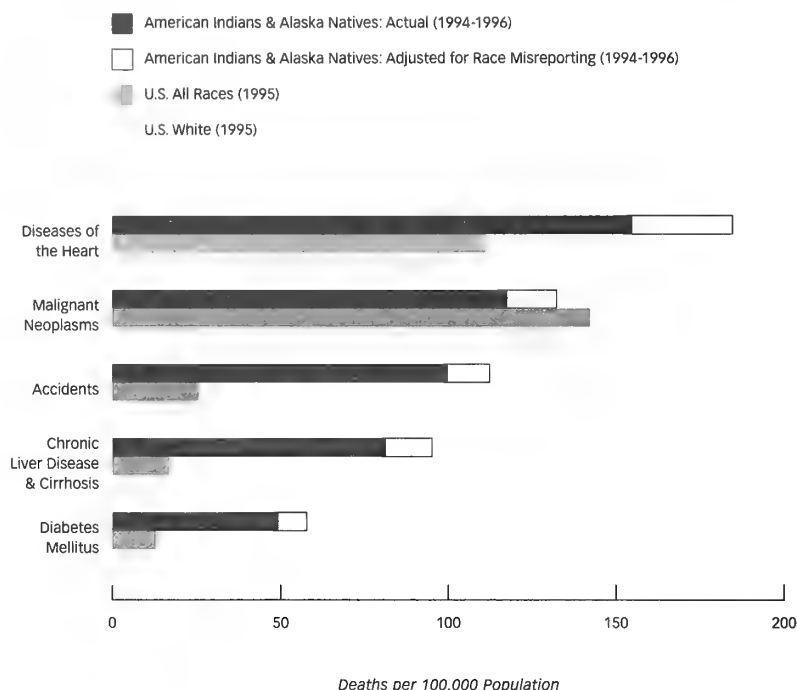
<sup>1</sup> Adjusted to compensate for misreporting of Indian race on state death certificates.

**Note:** Causes of death are listed based upon the order of adjusted number of deaths.

## CHART 7

### Death Rates, Leading Causes: Ages 45 to 54 Years

Unintentional injuries is the third leading cause of death for persons, 45 to 54 years of age, in the Indian population as well as the U.S. All Races and White populations. For every 100 Indian deaths in this age group, 13 deaths are attributable to unintentional injuries. Suicide is the fourth leading cause for U.S. Whites in this age group. Suicide is not among the top five leading causes for either the Indian or U.S. All Races populations. These Indian rates are adjusted for misreporting of Indian deaths on state death certificates.



## TABLE 7

### Ten Leading Causes of Death for Decedents 45 to 54 Years of Age

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

Cause of Death	American Indian & Alaska Native		U.S.		U.S.		Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Number	Rate	Number	Rate	All Races	White	U.S. All Races	U.S. White
All Causes	2,453	2,798	754.1	860.1	460.1	413.0	1.9	2.1
Diseases of the heart	504	594	154.9	182.6	111.3	100.4	1.6	1.8
Malignant neoplasms	383	425	117.7	130.7	142.3	135.4	0.9	1.0
Accidents	325	366	99.9	112.5	25.8	28.1	4.4	4.0
Motor vehicle	171	194	52.6	59.6	10.0	13.6	6.0	4.4
Other accidents	154	172	47.3	52.9	15.9	14.5	3.3	3.6
Chronic liver disease and cirrhosis	265	308	81.5	94.7	16.9	15.8	5.6	6.0
Diabetes mellitus	161	192	49.5	59.0	12.9	10.7	4.6	5.5
Cerebrovascular diseases	88	100	27.1	30.7	17.7	13.8	1.7	2.2
Pneumonia and influenza	53	57	16.3	17.5	6.7	5.5	2.6	3.2
Suicide	51	54	15.7	16.6	14.6	15.9	1.1	1.0
Homicide and legal intervention	38	42	11.7	12.9	6.2	4.4	2.1	2.9
Septicemia	31	34	9.5	10.5	3.1	2.4	3.4	4.4
All other causes	554	626						

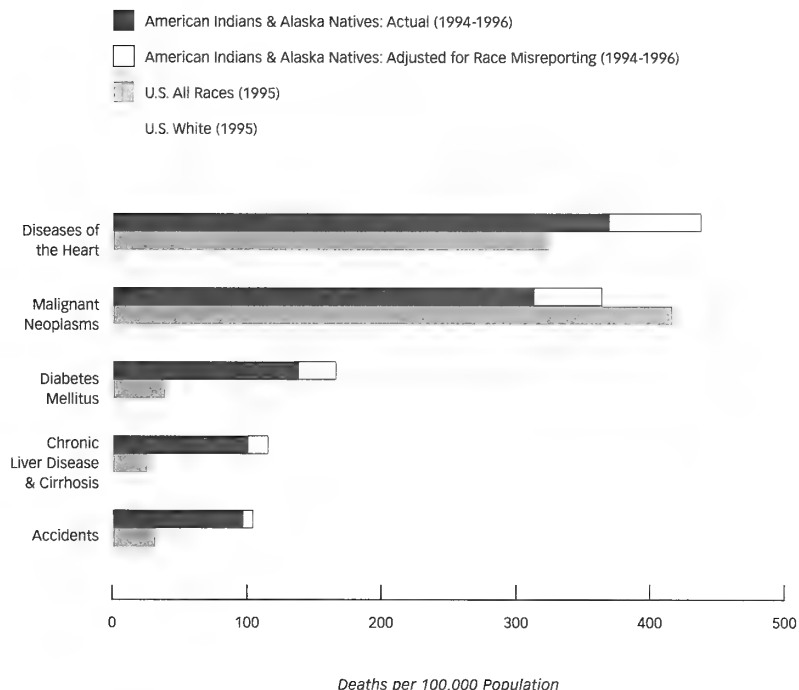
<sup>1</sup> Adjusted to compensate for misreporting of Indian race on state death certificates.

**Note:** Causes of death are listed based upon the order of adjusted number of deaths.

## CHART 8

### Death Rates, Leading Causes: Ages 55 to 64 Years

Unintentional injuries is the fifth leading cause of death for persons, 55 to 64 years of age, in the Indian population. For every 100 Indian deaths in this age group, 6 deaths are attributable to unintentional injuries. Unintentional injuries is the sixth leading cause of death for this age group in the U.S. All Races and White populations. These Indian rates are adjusted for misreporting of Indian deaths on state death certificates.



## TABLE 8

### Ten Leading Causes of Death for Decedents 55 to 64 Years of Age

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

Cause of Death	American Indian & Alaska Native		U.S.		U.S.		Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Number	Rate	Number	Rate	Number	Rate	U.S. All Races	U.S. White
All Causes	3,132	3,616	1,401.0	1,617.5	1,114.5	1,049.1	1.5	1.5
Diseases of the heart	826	982	369.5	439.2	324.1	303.9	1.4	1.4
Malignant neoplasms	701	815	313.6	364.5	416.4	404.7	0.9	0.9
Diabetes mellitus	309	375	138.2	167.7	38.8	32.6	4.3	5.1
Chronic liver disease and cirrhosis	225	257	100.6	115.0	25.4	24.5	4.5	4.7
Accidents	217	234	97.0	104.7	31.9	30.4	3.3	3.4
Motor vehicle	95	104	42.5	46.5	14.6	14.4	3.2	3.2
Other accidents	122	130	54.6	58.2	17.3	16.0	3.4	3.6
Cerebrovascular diseases	106	117	47.4	52.3	46.2	39.0	1.1	1.3
Chronic obstructive pulmonary diseases and allied conditions	75	85	33.5	38.0	47.3	48.6	0.8	0.8
Pneumonia and influenza	70	74	31.3	33.1	9.9	14.7	3.3	2.3
Nephritis, nephrotic syndrome, and nephrosis	45	47	20.1	21.0	8.2	6.4	2.6	3.3
Septicemia	32	34	14.3	15.2	8.2	6.8	1.9	2.2
All other causes	526	596						

<sup>1</sup>Adjusted to compensate for misreporting of Indian race on state death certificates.

**Note:** Causes of death are listed based upon the order of adjusted number of deaths.

## CHART 9

Death Rates for Leading Causes:  
Indians and Alaska Natives  
(1994-1996)

Unintentional injuries is the third leading cause of death, all ages, for the Indian population. For every 100 Indian deaths, 14 deaths are attributable to unintentional injuries. Unintentional injuries is the fifth leading cause of death in the U.S. All Races and White populations. These Indian rates are adjusted for misreporting of Indian deaths on state death certificates.

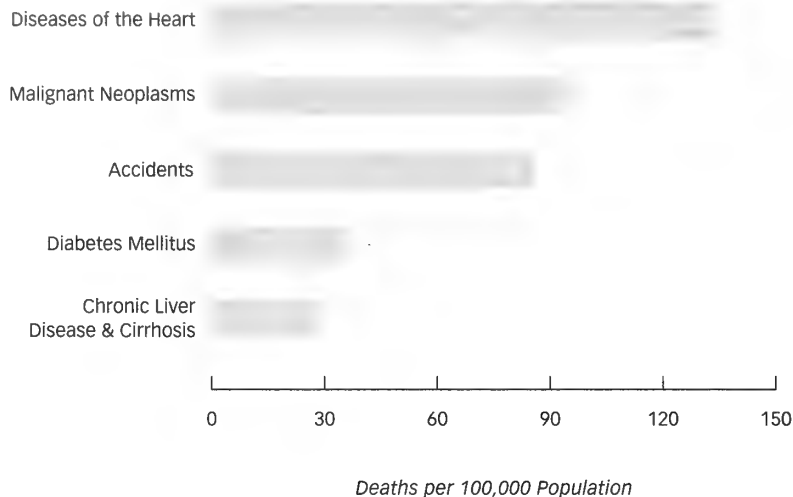


TABLE 9

Ten Leading Causes  
of Death for  
Decedents of All Ages

American Indians  
and Alaska Natives,  
IHS Service Area,  
1994-1996  
(Rate per 100,000  
Population)

Cause of Death	Number		Rate	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
All Causes	22,143	25,304	539.1	616.0
Diseases of the heart	4,688	5,482	114.1	133.5
Malignant neoplasms	3,413	3,879	83.1	94.4
Accidents	3,093	3,565	75.3	86.8
Motor vehicle	1,767	2,083	43.0	50.7
Other accidents	1,326	1,482	32.3	36.1
Diabetes mellitus	1,274	1,491	31.0	36.3
Chronic liver disease and cirrhosis	1,040	1,183	25.3	28.8
Cerebrovascular diseases	1,029	1,143	25.1	27.8
Pneumonia and influenza	840	912	20.4	22.2
Suicide	672	753	16.4	18.3
Chronic obstructive pulmonary diseases	574	632	14.0	15.4
Homicide and legal intervention	535	610	13.0	14.9
All other causes	4,985	5,654		

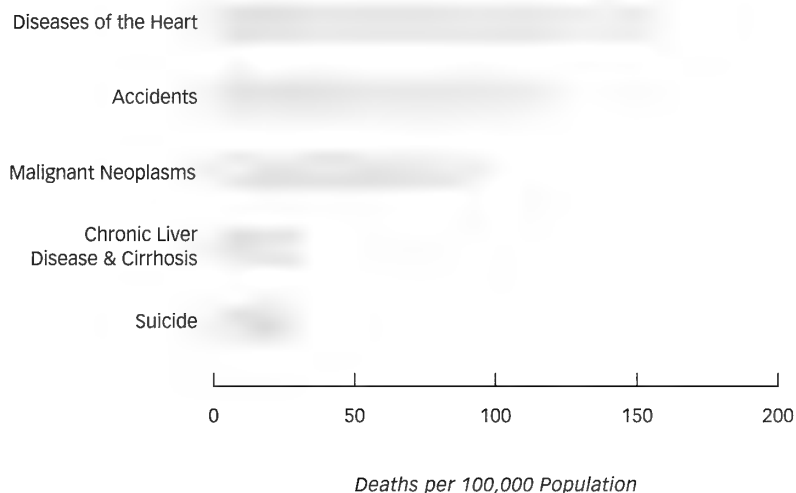
<sup>1</sup> Adjusted to compensate for misreporting of Indian race on state death certificates.

**Note:** Causes of death are listed based upon the order of adjusted number of deaths.

## CHART 10.1

### Death Rates for Leading Causes: Males, Indians and Alaska Natives (1994-1996)

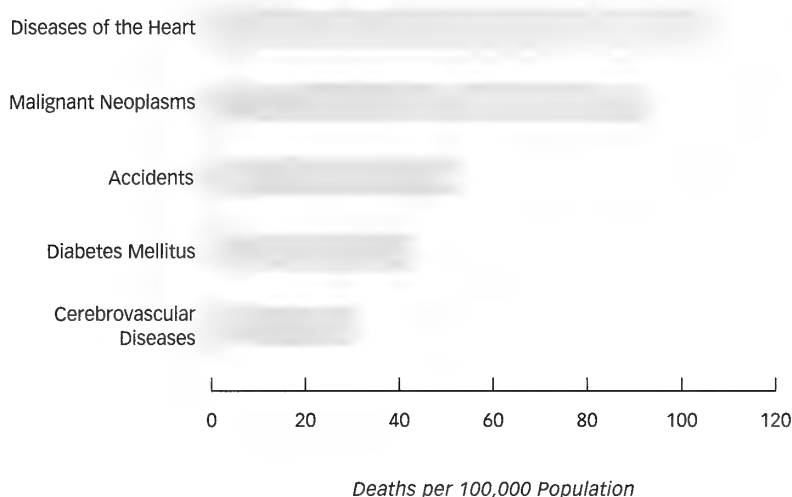
Unintentional injuries is the second leading cause of death, all ages, for Indian and fourth for U.S. All Races and White males. For every 100 Indian male deaths, 17 deaths are attributable to unintentional injuries. Suicide is the fifth leading cause for Indian males, but is not among the top five leading causes for either U.S. All Races or White males. These Indian rates are adjusted for misreporting of Indian deaths on state death certificates.



## CHART 10.2

### Death Rates for Leading Causes: Females, Indians and Alaska Natives (1994-1996)

Unintentional injuries is the third leading cause of death, all ages, for Indian females. For every 100 Indian female deaths, 10 deaths are attributable to unintentional injuries. For U.S. White females, unintentional injuries is sixth and for U.S. All Races females, it is seventh. These Indian rates are adjusted for misreporting of Indian deaths on state death certificates.



**TABLE 10****Leading Causes  
of Death by Sex**

American Indians  
and Alaska Natives,  
IHS Service Area,  
1994-1996  
(Rate per 100,000  
Population)

Cause of Death	MALE		Number		Rate	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
All Causes	12,452	14,185	615.2	700.9		
Diseases of the heart	2,704	3,202	133.6	158.2		
Accidents	2,172	2,460	107.3	121.5		
Motor vehicle	1,186	1,361	58.6	67.2		
Other accidents	986	1,099	48.7	54.3		
Malignant neoplasms	1,709	1,936	84.4	95.7		
Chronic liver disease and cirrhosis	582	654	28.8	32.3		
Suicide	548	604	27.1	29.8		
Diabetes mellitus	514	587	25.4	29.0		
Cerebrovascular diseases	454	501	22.4	24.8		
Pneumonia and influenza	458	500	22.6	24.7		
Homicide and legal intervention	415	468	20.5	23.1		
Chronic obstructive pulmonary diseases and allied conditions	299	332	14.8	16.4		
All other causes	2,597	2,941				
Cause of Death	FEMALE		Number		Rate	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
All Causes	9,691	11,119	465.1	533.6		
Diseases of the heart	1,984	2,280	95.2	109.4		
Malignant neoplasms	1,704	1,943	81.8	93.2		
Accidents	921	1,105	44.2	53.0		
Motor vehicle	581	722	27.9	34.6		
Other accidents	340	383	16.3	18.4		
Diabetes mellitus	760	904	36.5	43.4		
Cerebrovascular diseases	575	642	27.6	30.8		
Chronic liver disease and cirrhosis	458	529	22.0	25.4		
Pneumonia and influenza	382	412	18.3	19.8		
Chronic obstructive pulmonary diseases and allied conditions	275	300	13.2	14.4		
Nephritis, nephrotic syndrome, and nephrosis	150	160	7.2	7.7		
Suicide	124	149	6.0	7.2		
All other causes	2,358	2,695				

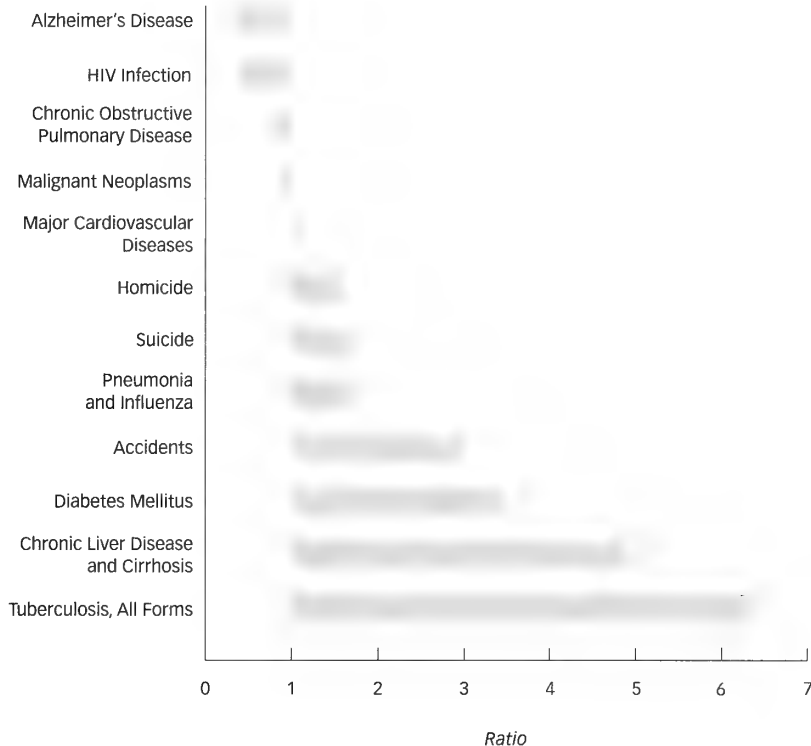
<sup>1</sup> Adjusted to compensate for misreporting of Indian race on state death certificates.

**Note:** Causes of death are listed based upon the order of adjusted number of deaths. During 1994-1996 there were 158 male deaths and 46 female deaths (adjusted counts) due to HIV infection among the American Indian and Alaska Native population residing in the IHS service delivery area.

## CHART 11

### Selected Age-Adjusted Death Rates, Ratio of American Indians to U.S. All Races (1995)

The Indian population has considerably higher age-adjusted death rates for unintentional injuries, suicide, and homicide than the U.S. All Races and White populations. The Indian age-adjusted unintentional injury death rate is 3.0 times the U.S. All Races rate and 3.1 times the U.S. White rate. For suicide, these relationships are 1.7 times and 1.6 times, and for homicide, they are 1.6 times and 2.8 times. These Indian rates are adjusted for misreporting of Indian deaths on state death certificates.

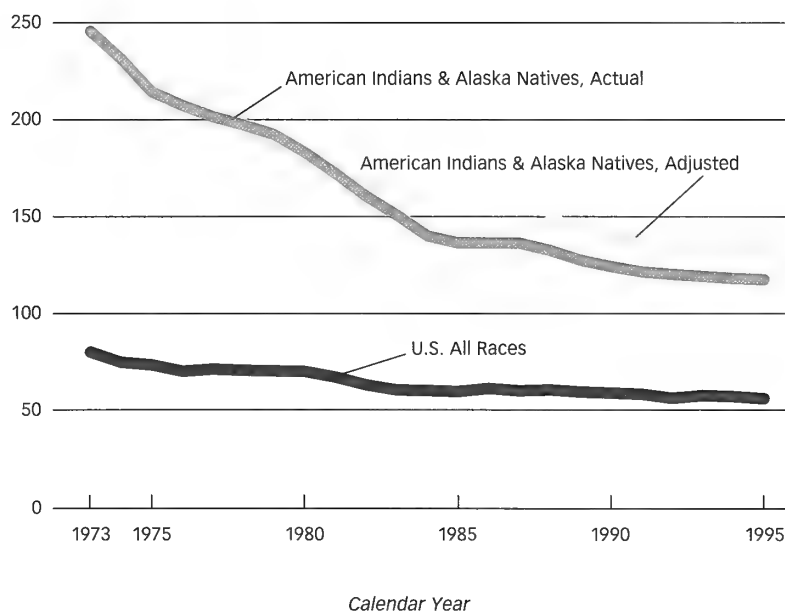


## CHART 12

### Age-Adjusted Injury and Poisoning Death Rates

The Indian age-adjusted death rate due to injury and poisoning (unintentional injury, suicide, homicide, firearm injury, and other injury) has decreased 53 percent since 1972-74 (unadjusted rates). Despite this improvement, the 1994-96 Indian rate (129.7) is still 2.5 times the 1995 U.S. All Races rate (52.2) and 165 percent greater than the 1995 U.S. White rate (49.0). The 1994-96 Indian rate is adjusted for misreporting of Indian deaths on state death certificates.

Per 100,000 Population



**TABLE 11****Age-Adjusted Death Rates**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

Cause of Death	American Indian & Alaska Native		U.S. All Races	U.S. White	Ratio <sup>1</sup> of American Indian & Alaska Native to:	
	Actual	Adj <sup>1</sup>			U.S. All Races	U.S. White
All Causes	609.8	699.3	503.9	476.9	1.4	1.5
Major cardiovascular diseases	168.3	195.7	174.9	167.2	1.1	1.2
Diseases of the heart	132.4	156.0	138.3	133.1	1.1	1.2
Cerebrovascular diseases	27.2	30.5	26.7	24.7	1.1	1.2
Atherosclerosis	2.6	2.8	2.3	2.3	1.2	1.2
Hypertension	2.1	2.1	2.3	1.8	0.9	1.2
Accidents	80.6	92.6	30.5	29.9	3.0	3.1
Motor vehicle	45.9	54.0	16.3	16.4	3.3	3.3
All other	34.7	38.6	14.2	13.5	2.7	2.9
Malignant neoplasms	102.1	116.6	129.9	127.0	0.9	0.9
Chronic liver disease and cirrhosis	32.6	37.2	7.6	7.4	4.9	5.0
Diabetes mellitus	39.4	46.4	13.3	11.7	3.5	4.0
Pneumonia and influenza	20.2	22.0	12.9	12.4	1.7	1.8
Suicide	17.3	19.3	11.2	11.9	1.7	1.6
Homicide	13.5	15.3	9.4	5.5	1.6	2.8
Chronic obstructive pulmonary diseases and allied conditions	15.6	17.3	20.8	21.3	0.8	0.8
Tuberculosis, all forms	1.9	1.9	0.3	0.2	6.3	9.5
Human immunodeficiency virus (HIV) infection	5.3	6.2	15.6	11.1	0.4	0.6
Alzheimer's disease	1.0	1.2	2.7	2.8	0.4	0.4

<sup>1</sup> Adjusted to compensate for misreporting of Indian race on state death certificates.

**Source:** U.S. Mortality Rates: Monthly Vital Statistics Report, NCHS, DHHS, Advance Report of Final Mortality Statistics, 1995, Vol. 45, No. 11, Supplement 2, June 12, 1997, Table 12.



**TABLE 12****Injury and Poisoning<sup>1</sup> Deaths and Death Rates**

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian & Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian & Alaska Native to:			
	Number		Rate				U.S. All Races		U.S. White	
	Actual	Adj	Actual	Adj			Actual	Adj	Actual	Adj
(1996)	1,470	1,686								
1994-1996 (1995)	1,450	1,669	113.6	129.7	52.2	49.0	2.2	2.5	2.3	2.6
1993-1995 (1994)	1,464	1,665	114.2	130.3	53.3	48.4	2.1	2.4	2.4	2.7
1992-1994 (1993)	1,403	1,609	115.3	131.1	53.8	48.9	2.1	2.4	2.4	2.7
1991-1993 (1992)	1,369	1,564	116.3	132.9	52.4	48.0	2.2	2.5	2.4	2.8
1990-1992 (1991)	1,397	1,610	117.6	134.0	54.5	49.8	2.2	2.5	2.4	2.7
1989-1991 (1990)	1,349	1,532	120.3	136.6	55.1	50.8	2.2	2.5	2.4	2.7
1988-1990 (1989)	1,367	1,548	123.6	139.4	55.6	50.9	2.2	2.5	2.4	2.7
1987-1989 (1988)	1,391	1,567	128.7	144.9	56.7	52.7	2.3	2.6	2.4	2.7
1986-1988 (1987)	1,390	1,568	132.4		56.2	52.8	2.4		2.5	
1985-1987 (1986)	1,375		132.5		57.4	54.1	2.3		2.4	
1984-1986 (1985)	1,275		132.5		55.8	53.0	2.4		2.5	
1983-1985 (1984)	1,254		136.1		56.3	53.7	2.4		2.5	
1982-1984 (1983)	1,280		146.9		56.6	53.6	2.6		2.7	
1981-1983 (1982)	1,351		156.6		59.2	55.9	2.6		2.8	
1980-1982 (1981)	1,344		168.3		63.2	59.5	2.7		2.8	
1979-1981 (1980)	1,418		179.2		66.1	61.9	2.7		2.9	
1978-1980 (1979)	1,472		188.4		66.4	62.1	2.8		3.0	
1977-1979 (1978)	1,383		193.3		66.7	62.6	2.9		3.1	
1976-1978 (1977)	1,346		197.6		67.3	62.8	2.9		3.1	
1975-1977 (1976)	1,321		203.4		66.2	63.8	3.1		3.2	
1974-1976 (1975)	1,283		210.4		69.5	63.8	3.0		3.3	
1973-1975 (1974)	1,229		227.3		70.8	64.6	3.2		3.5	
1972-1974 (1973)	1,381		241.7		76.1	69.4	3.2		3.5	
(1972)	1,241									
1954-1956 (1955)	2,273		200.3		69.2	51.9	2.9		3.9	

Adj—specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of Indian race on state death certificates.

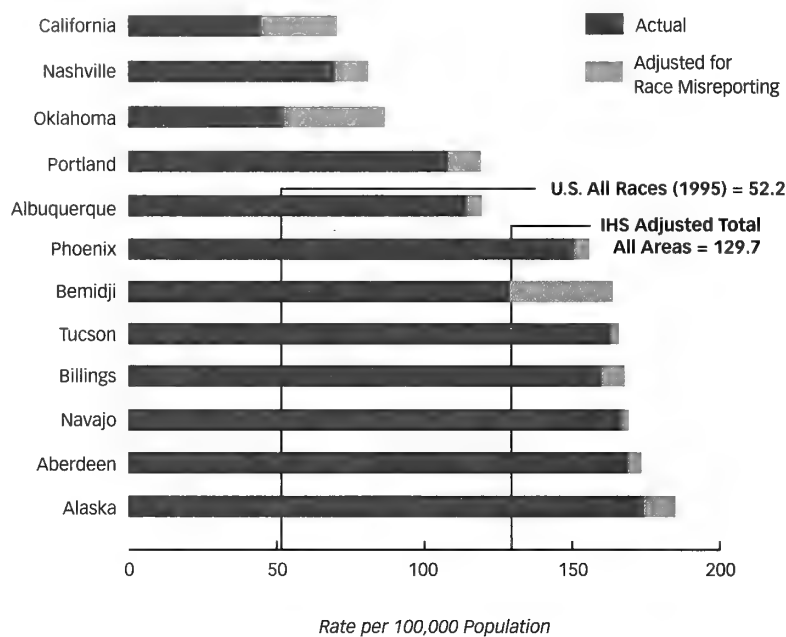
<sup>1</sup> Includes the following deaths and ICD9 codes: Motor vehicle accidents, E810–E825. Other accidents, E800–E807, E826–E949. Suicide, E950–E959. Homicide, E960–E978. Injury undetermined whether accidentally or purposely inflicted, E980–E989 and Injury resulting from operations of war, E990–E999.

**Note:** Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and rates for U.S. populations are for the single year specified.

**CHART 13**

**Age-Adjusted Injury and Poisoning  
Death Rates (1994-96)**

The Indian age-adjusted death rate due to injury and poisoning (unintentional injury, suicide, homicide, firearm injury, and other injury) varies considerably among the IHS Areas. The highest IHS Area rate (Alaska, 185.1) is over 3.5 times the U.S. All Races rate (52.2). Even the lowest IHS Area rate (California, 70.9) is 36 percent greater than the U.S. All Races rate. These Indian rates are adjusted for misreporting of Indian deaths on state death certificates.



**TABLE 13**

**Age-Adjusted  
Injury and  
Poisoning<sup>1</sup>  
Death Rates  
(1994-1996)**

	Deaths <sup>2</sup>		Rate <sup>3</sup>	
	Actual	Adj <sup>4</sup>	Actual	Adj <sup>4</sup>
U.S. All Races (1995)	150,809		52.2	
All IHS Areas	4,384	5,020	113.6	129.7
Aberdeen	401	413	169.0	174.0
Alaska	469	498	174.4	185.1
Albuquerque	252	266	114.8	120.6
Bemidji	268	342	129.1	164.1
Billings	227	239	160.1	168.4
California	158	249	45.0	70.9
Nashville	143	168	70.0	81.5
Navajo	908	924	167.0	170.2
Oklahoma	426	716	52.6	87.8
Phoenix	565	586	150.8	156.1
Portland	444	494	108.2	119.5
Tucson	123	125	164.0	166.1

<sup>1</sup> Includes the following ICD-9 cause of death groups combined: Motor vehicle accidents-E810-E825. Other accidents-E800-E807, E826-E949. Suicide-E950-E959. Homicide-E960-E978. Injury undetermined whether accidentally or purposely inflicted-E980-E989. Injury resulting from operations of war-E990-E999.

<sup>2</sup> Includes deaths with age not reported. For IHS, includes Navajo-1 death, Oklahoma-1 death, Phoenix-1 death, and Tucson-2 deaths.

<sup>3</sup> Age-adjusted rate per 100,000 population.

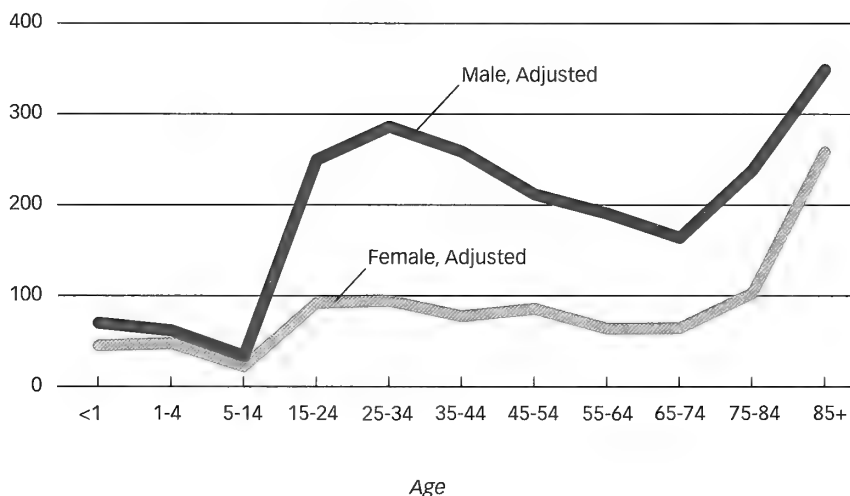
<sup>4</sup> Adjusted to compensate for misreporting of Indian race on state death certificates.

## CHART 14

### Injury and Poisoning Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)

Indian males are much more likely to die from injury and poisoning (unintentional injury, suicide, homicide, firearm injury, and other injury) than Indian females. The Indian male rates are more than triple the Indian female rates for age groups 25 through 44. The Indian male age groups with the highest rates are 15 through 44 and 75 and older. There is a similar pattern for U.S. All Races males, but the Indian male rates are more than double the U.S. All Races male rates for age groups through 64 years. These Indian rates are adjusted for misreporting of Indian deaths on state death certificates.

Per 100,000 Population



**TABLE 14****Injury and Poisoning Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	50.1	57.6	55.1	69.8	45.0	45.0
1-4 years	46.8	54.6	52.9	61.6	40.5	47.4
5-14 years	25.7	27.8	31.0	33.6	20.3	21.9
15-24 years	142.5	172.3	216.0	249.5	65.8	91.9
25-34 years	161.4	188.0	251.0	285.9	75.5	94.1
35-44 years	146.3	164.8	231.9	258.4	66.1	77.2
45-54 years	131.0	145.7	193.4	211.4	73.7	85.5
55-64 years	114.5	122.6	114.5	190.3	59.4	63.6
65-74 years	104.7	108.1	104.7	163.6	64.2	64.2
75-84 years	145.7	157.1	145.7	238.0	97.9	102.7
85 years +	291.1	291.1	291.1	348.5	258.0	258.0

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	30.1	31.8	28.3
1-4 years	18.3	20.4	14.9
5-14 years	11.8	15.2	8.3
15-24 years	73.6	115.1	30.4
25-34 years	65.7	103.4	28.0
35-44 years	61.3	94.5	28.7
45-54 years	52.3	80.1	25.8
55-64 years	50.6	76.2	27.5
65-74 years	64.6	94.2	40.8
75-84 years	123.2	180.8	86.6
85 years +	294.9	439.3	238.7

U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	24.7	27.1	22.1
1-4 years	15.5	17.7	13.1
5-14 years	10.9	14.0	7.7
15-24 years	65.9	100.3	29.7
25-34 years	59.8	93.2	25.8
35-44 years	57.5	87.9	26.9
45-54 years	49.6	74.8	25.1
55-64 years	48.7	72.3	26.9
65-74 years	63.1	91.4	40.2
75-84 years	123.2	180.5	86.7
85 years +	301.0	448.3	244.2

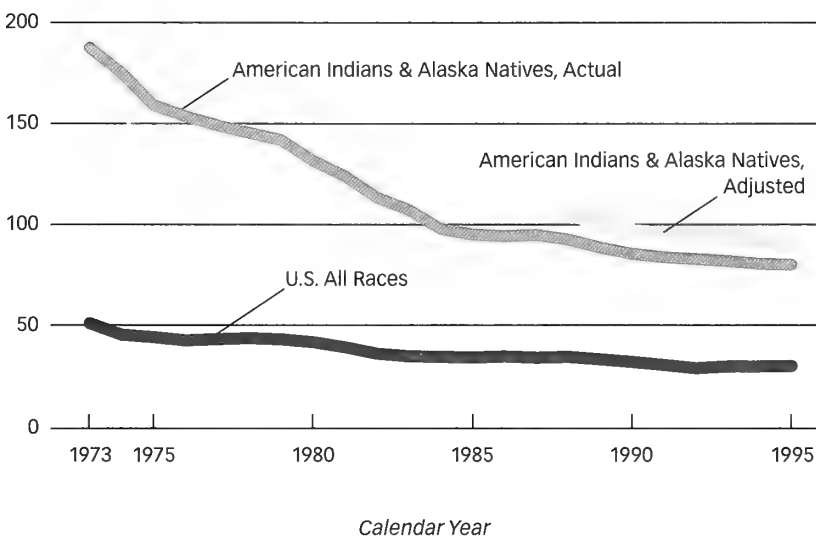
<sup>1</sup> Adjusted to compensate for misreporting of Indian race on state death certificates.

## CHART 15

### Age-Adjusted Unintentional Injury Death Rates

The Indian age-adjusted unintentional injury death rate has decreased 57 percent since 1972-74 (unadjusted rates). In 1972-74, the Indian rate (188.0) was 3.6 times the 1973 U.S. All Races rate (51.7) and 3.8 times the 1973 U.S. White rate (49.5). For 1994-96, the Indian rate (92.6) is 204 percent greater than the 1995 All Races rate (30.5) and 210 percent greater than the White rate (29.9). The 1994-96 Indian rates are adjusted for misreporting of Indian deaths on state death certificates.

Per 100,000 Population

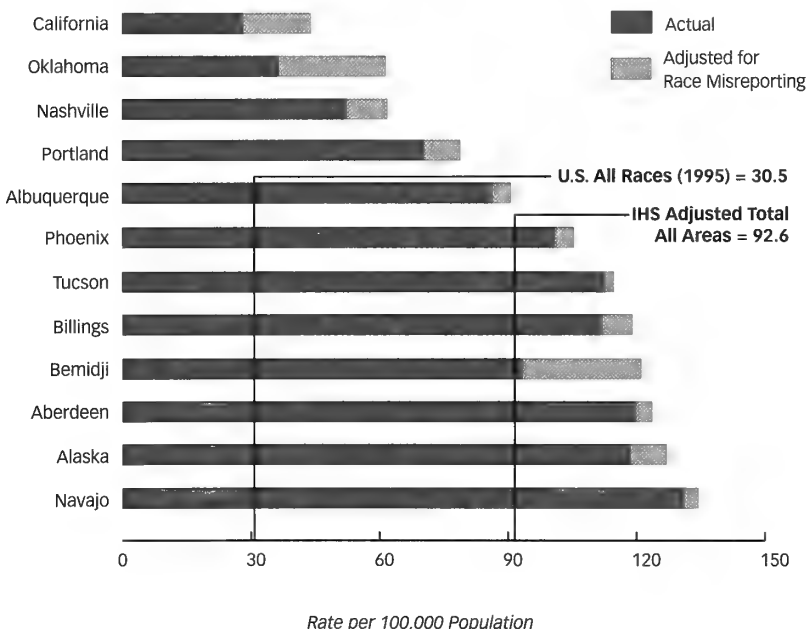


## CHART 16

### Age-Adjusted Unintentional Injury Death Rates

The Navajo and Alaska Areas have the highest age-adjusted unintentional injury death rates (134.6 and 127.4, respectively) among the IHS Areas. These rates are about 3 times the lowest IHS Area rate (California, 44.1), but over 4 times the U.S. All Races rate (30.5). These Indian rates are adjusted for misreporting of Indian deaths on state death certificates.

Calendar Years 1994-96



**TABLE 15****Age-Adjusted Unintentional Injury Death Rates**

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian & Alaska Native						U.S. All Races		U.S. White	
	Total Deaths		All Unintentional Injuries		Motor Vehicle		All Unintentional Injuries	Motor Vehicle	All Unintentional Injuries	Motor Vehicle
	Actual	Adj	Actual	Adj	Actual	Adj				
(1996)	1,055	1,212								
1994-1996 (1995)	1,016	1,180	80.6	92.6	45.9	54.0	30.5	16.3	29.9	16.4
1993-1995 (1994)	1,022	1,173	81.1	93.3	45.4	53.4	30.3	16.1	29.5	16.2
1992-1994 (1993)	1,007	1,168	82.4	94.5	45.5	53.3	30.3	16.0	29.6	16.1
1991-1993 (1992)	977	1,126	83.4	96.1	47.0	55.4	29.4	15.8	28.8	15.9
1990-1992 (1991)	988	1,154	84.3	96.6	47.5	55.8	31.0	17.0	30.3	17.2
1989-1991 (1990)	970	1,101	86.0	98.0	48.4	56.3	32.5	18.5	31.8	18.6
1988-1990 (1989)	969	1,097	89.1	100.8	49.6	57.2	33.8	18.9	32.9	19.1
1987-1989 (1988)	1,012	1,148	93.1	104.8	52.2	59.9	35.0	19.7	34.1	20.0
1986-1988 (1987)	1,000	1,135	95.4		54.3		34.6	19.5	33.9	19.8
1985-1987 (1986)	983		94.8		54.2		35.2	19.4	34.5	19.8
1984-1986 (1985)	912		95.6		53.0		34.7	18.8	34.1	19.1
1983-1985 (1984)	920		98.4		53.2		35.0	19.1	34.6	19.6
1982-1984 (1983)	905		107.8		57.0		35.3	18.5	34.7	19.0
1981-1983 (1982)	999		113.9		62.1		36.6	19.3	36.1	19.8
1980-1982 (1981)	972		124.5		69.4		39.8	21.8	39.3	22.5
1979-1981 (1980)	1,058		132.1		75.2		42.3	22.9	41.5	23.4
1978-1980 (1979)	1,095		142.4		80.4		43.7	23.7	42.9	24.3
1977-1979 (1978)	1,070		145.9		82.4		44.3	23.4	43.3	23.8
1976-1978 (1977)	1,004		149.7		85.0		43.8	22.4	42.5	22.5
1975-1977 (1976)	994		154.1		86.9		43.2	21.5	41.8	21.5
1974-1976 (1975)	999		159.7		87.8		44.8	21.3	43.1	21.2
1973-1975 (1974)	921		175.7		97.3		46.0	21.8	44.3	21.7
1972-1974 (1973)	1,089		188.0		104.8		51.7	26.4	49.5	26.0
(1972)	987									
1954-1956 (1955)	714		184.0		97.6		54.3	24.6	52.2	24.3

Adj—specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of Indian race on state death certificates.

**Note:** Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown.

Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and rates for U.S. populations are for the single year specified.

**TABLE 16****Unintentional Injury Deaths and Death Rates**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

Calendar Years 1994-96

	All Unintentional Injuries				Motor Vehicle Unintentional Injuries			Other Unintentional Injuries	
	Deaths		Rate <sup>1</sup>		Totals		Percent of Motor Vehicle Unintentional Injury Deaths Pedestrian-related <sup>3</sup>	Rate <sup>1</sup>	
	Actual	Adj <sup>2</sup>	Actual	Adj <sup>2</sup>	Actual	Adj <sup>2</sup>		Actual	Adj <sup>2</sup>
U.S. All Races (1995)	93,320		30.5		16.3			14.2	
All IHS Areas	3,093	3,565	80.6	92.6	45.9	54.0	22.7%	34.7	38.6
Aberdeen	284	295	120.0	124.4	67.9	71.9	17.8%	52.1	52.5
Alaska	318	341	118.7	127.4	27.0	27.7	22.4%	91.7	99.6
Albuquerque	190	202	86.4	91.4	57.1	62.1	30.0%	29.3	29.3
Bemidji	194	253	93.5	121.5	60.6	83.1	17.7%	32.9	38.4
Billings	156	167	112.1	119.8	67.5	74.9	16.3%	44.6	44.9
California	98	153	28.3	44.1	14.8	23.7	19.0%	13.5	20.5
Nashville	107	129	52.4	62.6	33.5	42.0	20.9%	18.9	20.6
Navajo	706	722	131.4	134.6	83.3	85.8	30.7%	48.1	48.8
Oklahoma	298	504	36.6	61.6	22.5	39.0	17.1%	14.1	22.6
Phoenix	370	388	100.9	105.5	61.5	65.1	25.5%	39.3	40.4
Portland	288	325	70.5	79.0	37.3	42.7	18.5%	33.3	36.2
Tucson	84	86	112.8	114.9	68.2	68.2	21.6%	44.6	46.7

<sup>1</sup> Age-adjusted rate per 100,000 population.

<sup>2</sup> Adjusted to compensate for misreporting of Indian race on state death certificates.

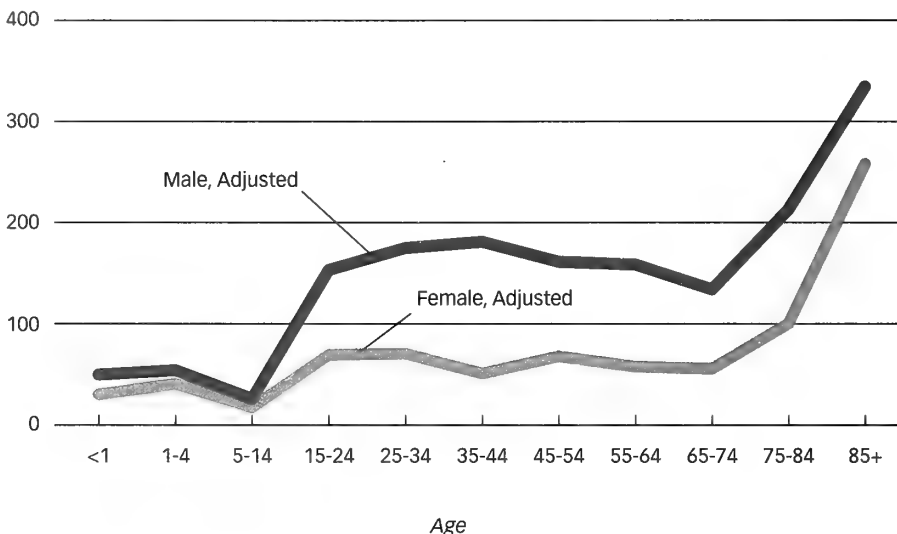
<sup>3</sup> Includes Motor vehicle accidents having ICD-9 codes E810-E825 with a fourth digit code .7. The fourth digit code .7 indicates a pedestrian was the subject decedent as a result of the motor vehicle accident. Percents are based upon adjusted numbers of deaths.

## CHART 17

### Unintentional Injury Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)

The highest unintentional injury death rates occur in the very elder population, those aged 75 and older. Excluding the very elder population (75 years and older), the highest Indian male rate (181.1) occurs in the 35 to 44 year age group. This is 3.0 times the comparable peak for the U.S. All Races male population (60.1 for 65 to 74 years) and 2.6 times the comparable peak for the Indian female population (70.4 for 25 to 34 years). The Indian female peak is in turn 2.1 times the comparable peak for the U.S. All Races female population (32.9 for 65 to 74 years). These Indian rates are adjusted for misreporting of Indian deaths on state death certificates.

Per 100,000 Population





**TABLE 17****Unintentional Injury Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	36.2	39.9	42.3	49.6	30.0	30.0
1-4 years	40.1	47.4	45.3	54.0	34.7	40.5
5-14 years	20.0	21.6	23.8	25.8	16.1	17.3
15-24 years	90.6	112.0	131.4	153.1	48.2	69.2
25-34 years	103.3	121.5	152.2	174.9	56.0	70.4
35-44 years	99.9	113.9	159.7	181.1	43.8	50.9
45-54 years	99.9	112.5	145.2	161.3	58.4	67.8
55-64 years	97.1	104.7	147.1	158.6	53.5	57.7
65-74 years	87.5	90.2	127.7	134.0	55.6	55.6
75-84 years	134.3	145.7	191.8	213.1	95.6	100.3
85 years +	286.0	286.0	334.5	334.5	258.0	258.0
U.S. All Races						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	20.6		21.5		19.5	
1-4 years	14.5		16.9		12.1	
5-14 years	9.4		11.8		6.8	
15-24 years	38.9		56.8		20.2	
25-34 years	33.2		51.0		15.4	
35-44 years	33.7		51.4		16.2	
45-54 years	30.0		45.3		15.4	
55-64 years	32.1		46.0		19.5	
65-74 years	45.0		60.1		32.9	
75-84 years	98.6		131.0		78.0	
85 years +	268.4		368.9		229.2	
U.S. White						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	17.4		19.0		15.8	
1-4 years	13.3		15.4		11.1	
5-14 years	8.8		11.1		6.4	
15-24 years	40.6		58.7		21.4	
25-34 years	33.0		50.6		15.1	
35-44 years	32.2		48.9		15.3	
45-54 years	28.1		42.0		14.4	
55-64 years	30.4		42.9		18.9	
65-74 years	43.5		57.3		32.3	
75-84 years	98.0		129.1		78.2	
85 years +	274.1		374.0		235.6	

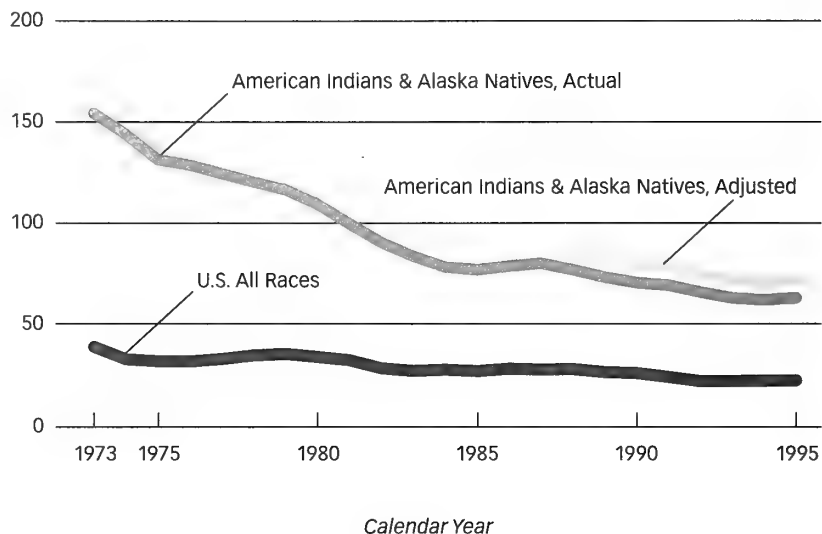
<sup>1</sup> Adjusted to compensate for misreporting of Indian race on death certificates.

## CHART 18

### Age-Adjusted Motor Vehicle Death Rates for Males

The Indian male age-adjusted motor vehicle unintentional injury death rate has decreased 59 percent since 1972-74 (unadjusted rates). In 1972-74, the Indian male rate (154.8) was 3.9 times the 1973 U.S. All Races male rate (39.3) and 4.0 times the 1973 U.S. White male rate (38.4). For 1994-96, the Indian male rate (72.5) is 69 percent greater than the 1995 U.S. All Races male rate (22.7) and the U.S. White male rate (22.6). The 1994-96 Indian rates are adjusted for misreporting of Indian deaths on state death certificates.

Per 100,000 Population



**TABLE 18****Motor Vehicle Deaths and Death Rates for Males**

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native to:			
	Number		Rate				U.S. All Races		U.S. White	
	Actual	Adjusted	Actual	Adjusted			Actual	Adjusted	Actual	Adjusted
(1996)	417	481								
1994-1996 (1995)	396	456	63.5	72.5	22.7	22.6	2.8	3.2	2.8	3.2
1993-1995 (1994)	373	424	62.5	71.3	22.5	22.5	2.8	3.2	2.8	3.2
1992-1994 (1993)	367	423	63.4	72.5	22.4	22.5	2.8	3.2	2.8	3.2
1991-1993 (1992)	382	443	66.3	75.8	22.3	22.2	3.0	3.4	3.0	3.4
1990-1992 (1991)	393	449	69.7	79.1	24.4	24.4	2.9	3.2	2.9	3.2
1989-1991 (1990)	399	451	71.1	80.2	26.3	26.3	2.7	3.0	2.7	3.0
1988-1990 (1989)	381	432	73.7	83.1	26.8	26.8	2.8	3.1	2.8	3.1
1987-1989 (1988)	410	467	77.4	87.7	28.3	28.5	2.7	3.1	2.7	3.1
1986-1988 (1987)	423	481	80.6		28.1	28.4	2.9		2.8	
1985-1987 (1986)	395		79.2		28.5	28.7	2.8		2.8	
1984-1986 (1985)	354		77.4		27.3	27.6	2.8		2.8	
1983-1985 (1984)	351		78.7		28.0	28.4	2.8		2.8	
1982-1984 (1983)	358		84.1		27.4	27.8	3.1		3.0	
1981-1983 (1982)	362		90.9		28.7	29.3	3.2		3.1	
1980-1982 (1981)	405		100.2		32.7	33.4	3.1		3.0	
1979-1981 (1980)	429		109.9		34.3	34.8	3.2		3.2	
1978-1980 (1979)	448		117.0		35.8	36.2	3.3		3.2	
1977-1979 (1978)	431		120.8		35.1	35.2	3.4		3.4	
1976-1978 (1977)	416		125.0		33.3	33.2	3.8		3.8	
1975-1977 (1976)	413		129.2		32.1	31.8	4.0		4.1	
1974-1976 (1975)	419		131.9		32.2	31.7	4.1		4.2	
1973-1975 (1974)	357		144.4		33.2	32.8	4.3		4.4	
1972-1974 (1973)	443		154.8		39.3	38.4	3.9		4.0	
(1972)	399									
1954-1956 (1955)	NA		NA		38.4	37.8	NA		NA	

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of Indian race on state death certificates.

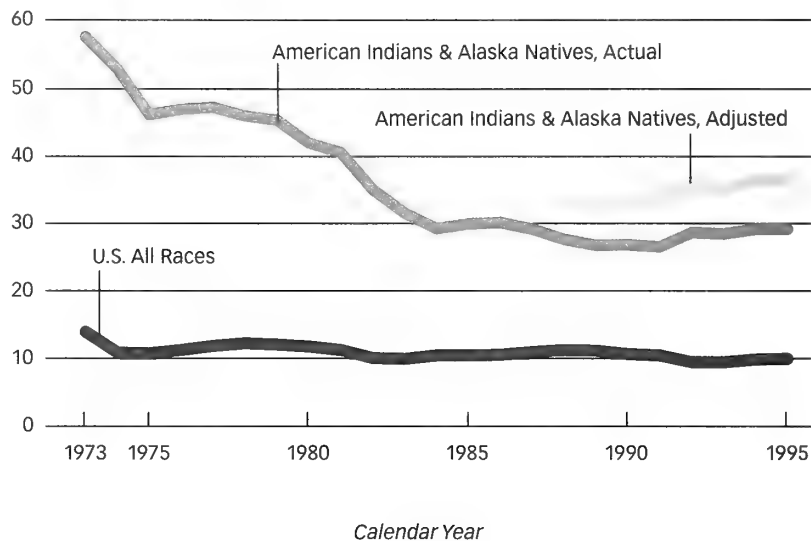
**Note:** NA denotes data not available

## CHART 19

### Age-Adjusted Motor Vehicle Death Rates for Females

The Indian female age-adjusted motor vehicle unintentional injury death rate has decreased 49 percent since 1972-74 (unadjusted rates). In 1972-74, the Indian female rate (57.8) was 4.1 times the 1973 U.S. All Races and White female rates (both 14.0). For 1994-96, the Indian female rate (36.4) is 264 percent greater than the 1995 All Races female rate (10.0) and 253 percent greater than the White female rate (10.3). The 1994-96 Indian rate is adjusted for misreporting of Indian deaths on state death certificates.

Per 100,000 Population



**TABLE 19****Motor Vehicle Deaths and Death Rates for Females**

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native to:			
	Number		Rate				U.S. All Races		U.S. White	
	Actual	Adjusted	Actual	Adjusted			Actual	Adjusted	Actual	Adjusted
(1996)	208	257								
1994-1996 (1995)	194	247	29.2	36.4	10.0	10.3	2.9	3.6	2.8	3.5
1993-1995 (1994)	179	218	29.2	36.5	9.9	10.0	2.9	3.7	2.9	3.7
1992-1994 (1993)	201	249	28.5	35.2	9.5	9.8	3.0	3.7	2.9	3.6
1991-1993 (1992)	156	197	28.7	36.2	9.5	9.6	3.0	3.8	3.0	3.8
1990-1992 (1991)	165	218	26.6	33.8	10.5	10.8	2.5	3.2	2.5	3.1
1989-1991 (1990)	149	186	26.9	33.6	10.7	11.0	2.5	3.1	2.4	3.1
1988-1990 (1989)	155	186	26.8	32.6	11.2	11.5	2.4	2.9	2.3	2.8
1987-1989 (1988)	155	188	27.7	33.5	11.3	11.6	2.5	3.0	2.4	2.9
1986-1988 (1987)	151	185	29.2		11.0	11.4	2.7		2.6	
1985-1987 (1986)	171		30.2		10.6	11.0	2.8		2.7	
1984-1986 (1985)	154		30.0		10.5	10.8	2.9		2.8	
1983-1985 (1984)	134		29.3		10.5	10.9	2.8		2.7	
1982-1984 (1983)	140		31.6		10.0	10.3	3.2		3.1	
1981-1983 (1982)	168		35.1		10.1	10.5	3.5		3.3	
1980-1982 (1981)	165		40.6		11.3	11.7	3.6		3.5	
1979-1981 (1980)	193		42.0		11.8	12.3	3.6		3.4	
1978-1980 (1979)	168		45.4		12.1	12.6	3.8		3.6	
1977-1979 (1978)	175		46.0		12.3	12.6	3.7		3.7	
1976-1978 (1977)	177		47.3		11.9	12.2	4.0		3.9	
1975-1977 (1976)	156		47.0		11.3	11.5	4.2		4.1	
1974-1976 (1975)	151		46.2		10.8	10.9	4.3		4.2	
1973-1975 (1974)	138		53.0		10.9	11.0	4.9		4.8	
1972-1974 (1973)	184		57.8		14.0	14.0	4.1		4.1	
(1972)	158									
1954-1956 (1955)	NA		NA		11.6	11.4	NA		NA	

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of Indian race on state death certificates.

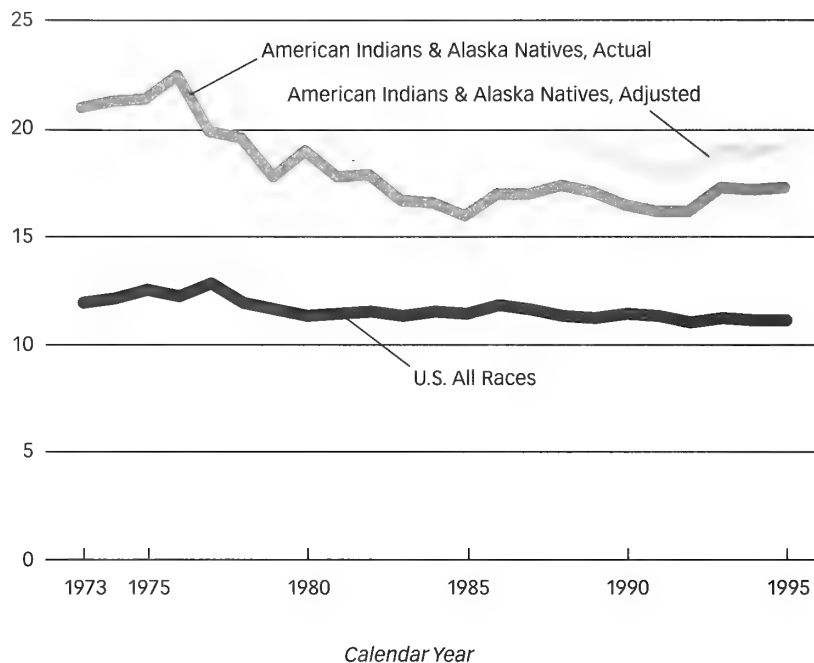
**Note:** NA denotes data not available

## CHART 20

### Age-Adjusted Suicide Death Rates

During the period since 1972-74, the Indian age-adjusted suicide death rate reached a peak in 1975-77 (22.5 unadjusted) and a low in 1984-86 (16.0 unadjusted). The Indian unadjusted rate in 1994-96 (17.3) is 28 percent greater than that low. It is also 54 percent greater than the 1995 U.S. All Races rate (11.2) and 45 percent greater than the 1995 U.S. White rate (11.9).

Per 100,000 Population



**TABLE 20****Suicide Deaths and Death Rates**

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S.		Ratio of American Indian and Alaska Native to:			
	Number		Rate		All Races	White	U.S. All Races		U.S. White	
	Actual	Adjusted	Actual	Adjusted			Actual	Adjusted	Actual	Adjusted
(1996)	225	262								
1994-1996 (1995)	205	228	17.3	19.3	11.2	11.9	1.5	1.7	1.5	1.6
1993-1995 (1994)	242	263	17.2	18.9	11.2	11.9	1.5	1.7	1.4	1.6
1992-1994 (1993)	204	226	17.3	19.2	11.3	12.0	1.5	1.7	1.4	1.6
1991-1993 (1992)	193	219	16.2	18.0	11.1	11.8	1.5	1.6	1.4	1.5
1990-1992 (1991)	184	200	16.2	18.1	11.4	12.1	1.4	1.6	1.3	1.5
1989-1991 (1990)	195	218	16.5	18.4	11.5	12.2	1.4	1.6	1.4	1.5
1988-1990 (1989)	192	217	17.1	19.1	11.3	12.0	1.5	1.7	1.4	1.6
1987-1989 (1988)	185	206	17.4	19.4	11.4	12.2	1.5	1.7	1.4	1.6
1986-1988 (1987)	187	206	17.0		11.7	12.5	1.5		1.4	
1985-1987 (1986)	158		17.0		11.9	12.7	1.4		1.3	
1984-1986 (1985)	172		16.0		11.5	12.3	1.4		1.3	
1983-1985 (1984)	148		16.6		11.6	12.4	1.4		1.3	
1982-1984 (1983)	161		16.7		11.4	12.2	1.5		1.4	
1981-1983 (1982)	154		17.9		11.6	12.4	1.5		1.4	
1980-1982 (1981)	157		17.8		11.5	12.2	1.5		1.5	
1979-1981 (1980)	146		19.0		11.4	12.1	1.7		1.6	
1978-1980 (1979)	162		17.8		11.7	12.4	1.5		1.4	
1977-1979 (1978)	117		19.6		12.0	12.7	1.6		1.5	
1976-1978 (1977)	161		19.9		12.9	13.6	1.5		1.5	
1975-1977 (1976)	143		22.5		12.3	12.9	1.8		1.7	
1974-1976 (1975)	139		21.4		12.6	13.3	1.7		1.6	
1973-1975 (1974)	122		21.3		12.2	12.8	1.7		1.7	
1972-1974 (1973)	116		21.0		12.0	12.6	1.8		1.7	
(1972)	113									
1954-1956 (1955)	39		11.9		9.9	10.4	1.2		1.1	

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of Indian race on state death certificates.

**Note:** Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown.

Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and rates for U.S. populations are for the single year specified.

## CHART 21

### Age-Adjusted Suicide Death Rates

The age-adjusted suicide death rate is the highest in Alaska among the IHS Areas. The Alaska rate (41.9) is 41 percent greater than the next highest IHS Area rate (Aberdeen, 29.7) and nearly 4 times the lowest IHS Area rate (Nashville, 11.0). Nashville is the only IHS Area to have a rate below the U.S. All Races rate (11.2). These Indian rates are adjusted for misreporting of Indian deaths on state death certificates.

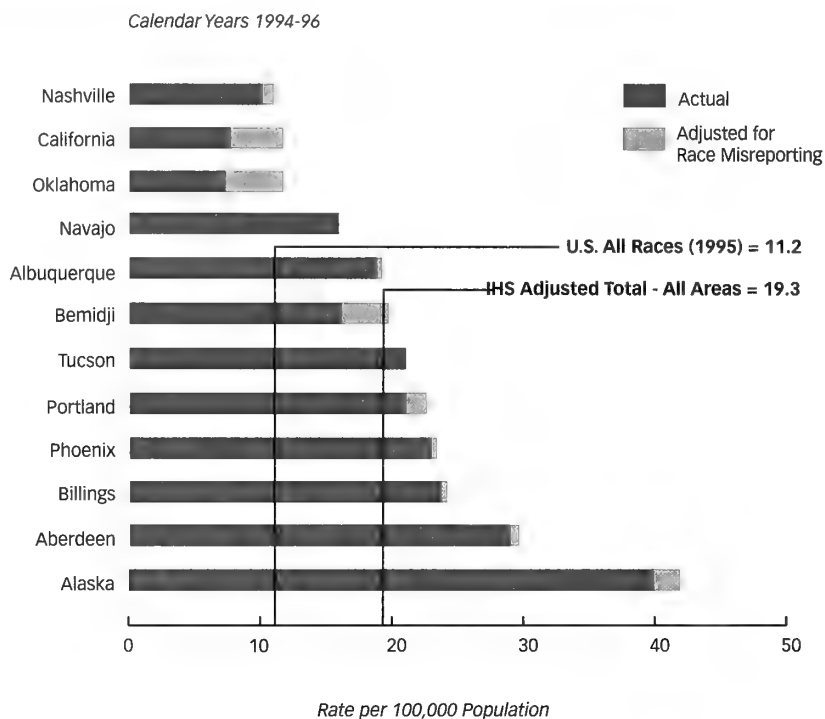


TABLE 21

### Age-Adjusted Suicide Death Rates (1994-1996)

	Deaths		Rate <sup>1</sup>	
	Actual	Adj <sup>2</sup>	Actual	Adj <sup>2</sup>
U.S. All Races (1995)	31,284		11.2	
All IHS Areas	672	753	17.3	19.3
Aberdeen	67	69	28.9	29.7
Alaska	110	116	39.9	41.9
Albuquerque	40	41	18.8	19.2
Bemidji	34	42	16.1	19.7
Billings	34	35	23.7	24.3
California	27	41	7.7	11.7
Nashville	21	23	10.1	11.0
Navajo	89	89	15.9	15.9
Oklahoma	58	95	7.3	11.9
Phoenix	91	93	22.9	23.4
Portland	85	93	21.0	22.8
Tucson	16	16	21.0	21.0

<sup>1</sup> Age-adjusted rate per 100,000 population. Rates based on a small number of deaths should be interpreted with caution.

<sup>2</sup> Adjusted to compensate for misreporting of Indian race on state death certificates.

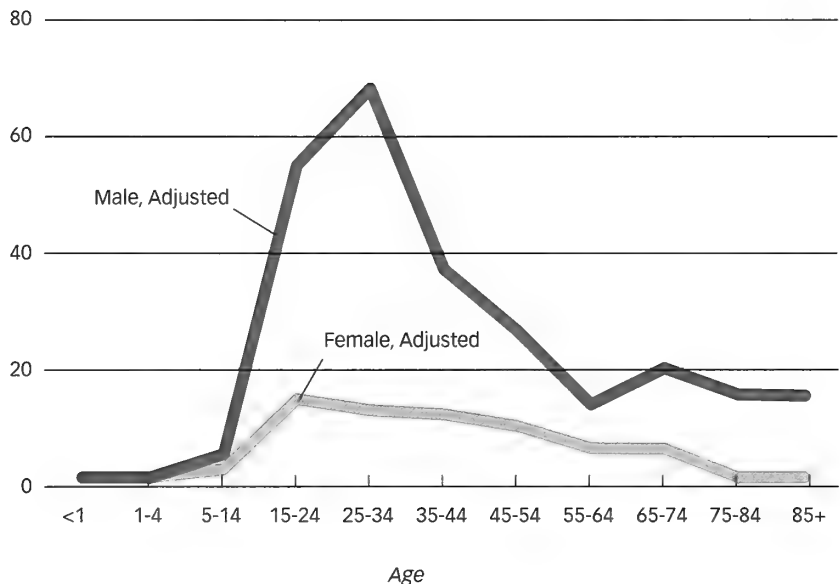


## CHART 22

### Suicide Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)

The highest Indian male suicide death rates occur in the 25 to 34 (66.7) and 15 to 24 (53.5) year old age groups. The peaks for Indian females are reversed in terms of age groups (13.4 for 15-24 years and 11.5 for 25-34 years), but these Indian female rates are about one-fifth the Indian male rates. The U.S. All Races male suicide death rates are highest for 85 years and older (63.1) and 75 to 84 years (44.8). For U.S. All Races females, the highest rates occur in the 10 year age groups between 35 to 54 years (6.5 to 6.7). These Indian rates have been adjusted for misreporting of Indian race on state death certificates.

Per 100,000 Population



**TABLE 22****Suicide Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	—	—	—	—	—	—
1-4 years	—	—	—	—	—	—
5-14 years	2.7	2.7	4.0	4.0	1.4	1.4
15-24 years	29.1	33.9	46.7	53.5	10.6	13.4
25-34 years	33.9	38.5	59.7	66.7	9.3	11.5
35-44 years	21.1	22.8	34.1	35.7	8.9	10.8
45-54 years	15.7	16.6	24.4	25.1	7.7	8.8
55-64 years	8.1	8.5	11.5	12.5	5.0	5.0
65-74 years	10.3	11.0	17.1	18.7	4.9	4.9
75-84 years	5.7	5.7	14.2	14.2	—	—
85 years +	5.1	5.1	13.9	13.9	—	—

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	—	—	—
1-4 years	—	—	—
5-14 years	0.9	1.3	0.4
15-24 years	13.4	22.6	3.7
25-34 years	15.4	25.7	5.2
35-44 years	15.3	24.2	6.5
45-54 years	14.6	22.9	6.7
55-64 years	13.3	22.1	5.3
65-74 years	15.8	28.7	5.4
75-84 years	20.8	44.8	5.5
85 years +	21.6	63.1	5.5

U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	—	—	—
1-4 years	—	—	—
5-14 years	1.0	1.4	0.4
15-24 years	14.0	23.6	3.9
25-34 years	16.3	26.8	5.5
35-44 years	16.5	25.9	7.2
45-54 years	15.9	24.6	7.4
55-64 years	14.4	23.6	5.8
65-74 years	16.7	30.4	5.7
75-84 years	22.1	47.6	5.8
85 years +	23.0	68.2	5.6

<sup>1</sup> Adjusted to compensate for misreporting of Indian race on state death certificates.

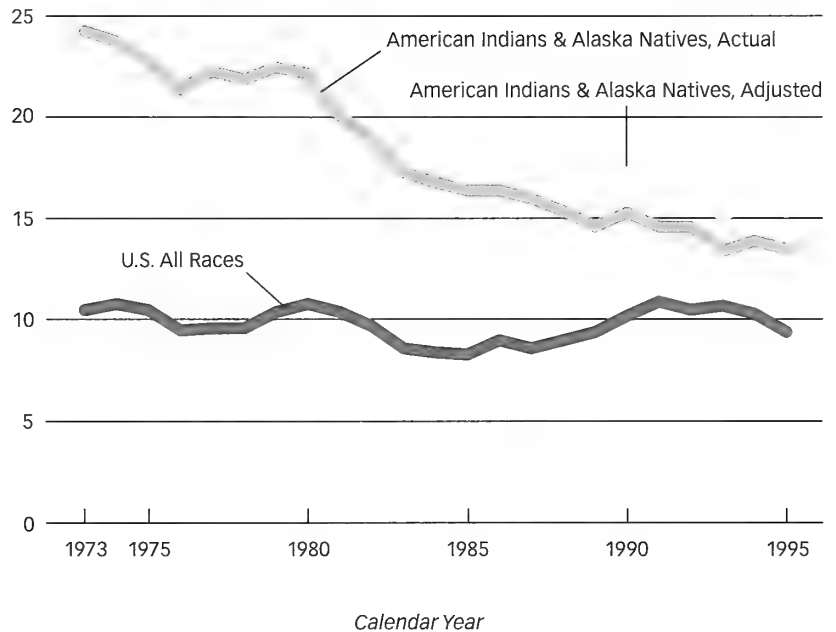
**Note:** — Represents zero.

## CHART 23

### Age-Adjusted Homicide Death Rates

The Indian age-adjusted homicide death rate has decreased 44 percent since 1972-74 (unadjusted rates). The 1994-96 Indian rate (15.3) is 63 percent greater than the 1995 U.S. All Races rate (9.4), but 178 percent greater than the 1995 U.S. White rate (5.5). The 1994-96 Indian rate is adjusted for misreporting of Indian deaths on state death certificates.

Per 100,000 Population



**TABLE 23****Homicide Deaths and Death Rates**

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S.		Ratio of American Indian and Alaska Native to:			
	Number		Rate		All Races	White	U.S. All Races		U.S. White	
	Actual	Adjusted	Actual	Adjusted			Actual	Adjusted	Actual	Adjusted
(1996)	161	178								
1994-1996 (1995)	198	231	13.5	15.3	9.4	5.5	1.4	1.6	2.5	2.8
1993-1995 (1994)	176	201	13.9	15.9	10.3	5.8	1.3	1.5	2.4	2.7
1992-1994 (1993)	168	190	13.4	15.1	10.7	6.0	1.3	1.4	2.2	2.5
1991-1993 (1992)	168	185	14.6	16.5	10.5	6.1	1.4	1.6	2.4	2.7
1990-1992 (1991)	199	229	14.6	16.6	10.9	6.2	1.3	1.5	2.4	2.7
1989-1991 (1990)	153	180	15.3	17.7	10.2	5.9	1.5	1.7	2.6	3.0
1988-1990 (1989)	177	205	14.6	16.6	9.4	5.4	1.6	1.8	2.7	3.1
1987-1989 (1988)	160	178	15.4	17.3	9.0	5.3	1.7	1.9	2.9	3.3
1986-1988 (1987)	161	185	16.0		8.6	5.3	1.9		3.0	
1985-1987 (1986)	184		16.4		9.0	5.6	1.8		2.9	
1984-1986 (1985)	151		16.4		8.3	5.4	2.0		3.0	
1983-1985 (1984)	146		16.8		8.4	5.5	2.0		3.1	
1982-1984 (1983)	171		17.3		8.6	5.6	2.0		3.1	
1981-1983 (1982)	145		19.0		9.7	6.3	2.0		3.0	
1980-1982 (1981)	165		20.1		10.4	6.6	1.9		3.0	
1979-1981 (1980)	172		22.2		10.8	6.9	2.1		3.2	
1978-1980 (1979)	164		22.5		10.4	6.5	2.2		3.5	
1977-1979 (1978)	158		21.9		9.6	6.0	2.3		3.7	
1976-1978 (1977)	139		22.3		9.6	5.9	2.3		3.8	
1975-1977 (1976)	144		21.4		9.5	5.5	2.3		3.9	
1974-1976 (1975)	115		22.8		10.5	6.1	2.2		3.7	
1973-1975 (1974)	136		23.8		10.8	6.0	2.2		4.0	
1972-1974 (1973)	139		24.3		10.5	5.7	2.3		4.3	
(1972)	93									
1954-1956 (1955)	77		23.8		4.8	2.4	5.0		9.9	

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of Indian race on state death certificates.

**Note:** Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and rates for U.S. populations are for the single year specified.

## CHART 24

### Age-Adjusted Homicide Death Rates (1994-1996)

The Tucson Area has a homicide death rate (29.0) which is more than triple the U.S. All Races rate (9.4). The lowest IHS Area rate occurs in Nashville (7.9). This is the only IHS Area rate that is below the U.S. All Races rate. These Indian rates are adjusted for misreporting of Indian deaths on state death certificates.

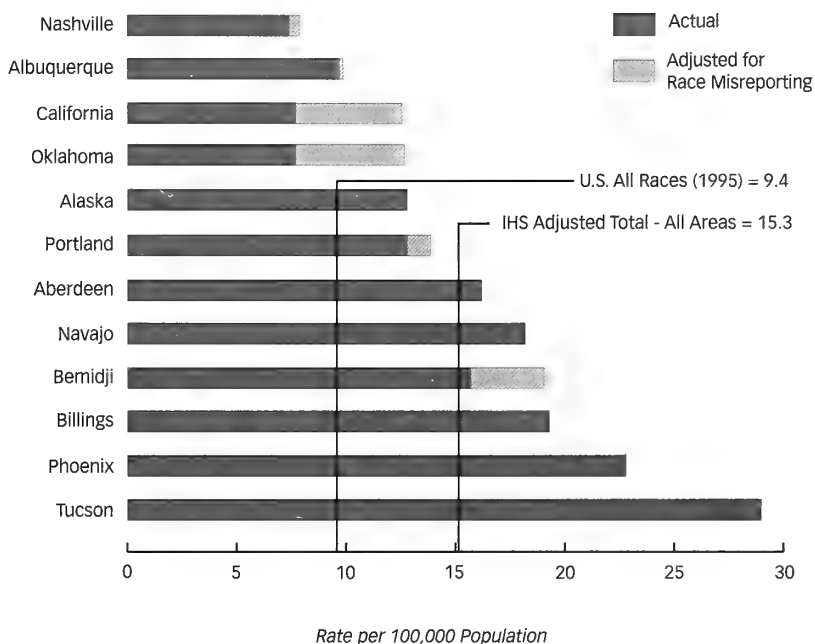


TABLE 24

### Age-Adjusted Homicide Death Rates (1994-1996)

	Deaths		Rate <sup>1</sup>	
	Actual	Adj <sup>2</sup>	Actual	Adj <sup>2</sup>
U.S. All Races (1995)	22,895		9.4	
All IHS Areas	535	610	13.5	15.3
Aberdeen	41	41	16.2	16.2
Alaska	33	33	12.8	12.8
Albuquerque	22	23	9.7	9.9
Bemidji	33	40	15.7	19.1
Billings	30	30	19.3	19.3
California	28	46	7.7	12.7
Nashville	15	16	7.4	7.9
Navajo	104	104	18.2	18.2
Oklahoma	62	104	7.7	12.7
Phoenix	91	92	22.7	22.8
Portland	54	59	12.8	13.9
Tucson	22	22	29.0	29.0

<sup>1</sup> Age-adjusted rate per 100,000 population. Rates based on a small number of deaths should be interpreted with caution.

<sup>2</sup> Adjusted to compensate for misreporting of Indian race on state death certificates.

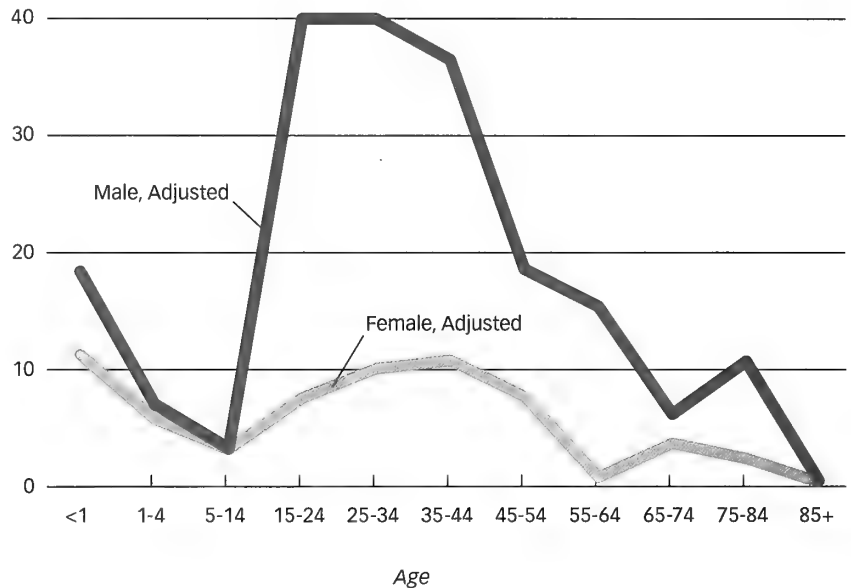
**Note:** Includes deaths due to homicide and legal intervention.

## CHART 25

### Homicide Death Rates by Age and Sex

The highest Indian male homicide death rates occur in the 10 year age groups between 15 to 44 years (36.5 to 40.0). This is also true for U.S. All Races males (14.6 to 34.0). However, for both Indian females and U.S. All Races females, the highest rate occurs in the under 1 year age group (11.3 and 7.2, respectively). These Indian rates have been adjusted for misreporting of Indian race on state death certificates.

Per 100,000 Population



**TABLE 25****Homicide Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	10.2	14.9	11.0	18.4	9.4	11.3
1-4 years	6.2	6.5	7.1	7.1	5.3	5.8
5-14 years	2.7	3.3	2.7	3.3	2.8	3.2
15-24 years	21.0	24.1	35.2	40.0	6.2	7.6
25-34 years	21.4	24.7	35.0	40.0	8.4	10.1
35-44 years	20.5	23.2	32.9	36.5	8.9	10.8
45-54 years	11.7	12.9	17.3	18.6	6.5	7.7
55-64 years	7.6	7.6	15.4	15.4	0.8	0.8
65-74 years	4.8	4.8	6.2	6.2	3.7	3.7
75-84 years	5.7	5.7	10.7	10.7	2.4	2.4
85 years +	—	—	—	—	—	—
U.S. All Races						
Age Group	Both Sexes		Male		Female	
Under 1 year	8.1		8.9		7.2	
1-4 years	2.9		3.1		2.6	
5-14 years	1.5		1.9		1.0	
15-24 years	20.3		34.0		6.1	
25-34 years	15.1		23.8		6.5	
35-44 years	9.7		14.6		4.9	
45-54 years	6.2		9.7		3.0	
55-64 years	4.5		7.2		2.1	
65-74 years	3.3		4.6		2.2	
75-84 years	3.1		3.7		2.7	
85 years +	3.3		4.3		2.9	
U.S. White						
Age Group	Both Sexes		Male		Female	
Under 1 year	6.1		7.1		5.0	
1-4 years	1.9		2.1		1.8	
5-14 years	1.0		1.3		0.8	
15-24 years	10.5		16.6		4.1	
25-34 years	8.7		13.0		4.2	
35-44 years	6.3		9.2		3.4	
45-54 years	4.4		6.4		2.5	
55-64 years	3.3		5.0		1.7	
65-74 years	2.4		3.2		1.9	
75-84 years	2.4		2.5		2.3	
85 years +	2.5		3.6		2.1	

<sup>1</sup> Adjusted to compensate for misreporting of Indian race on state death certificates.

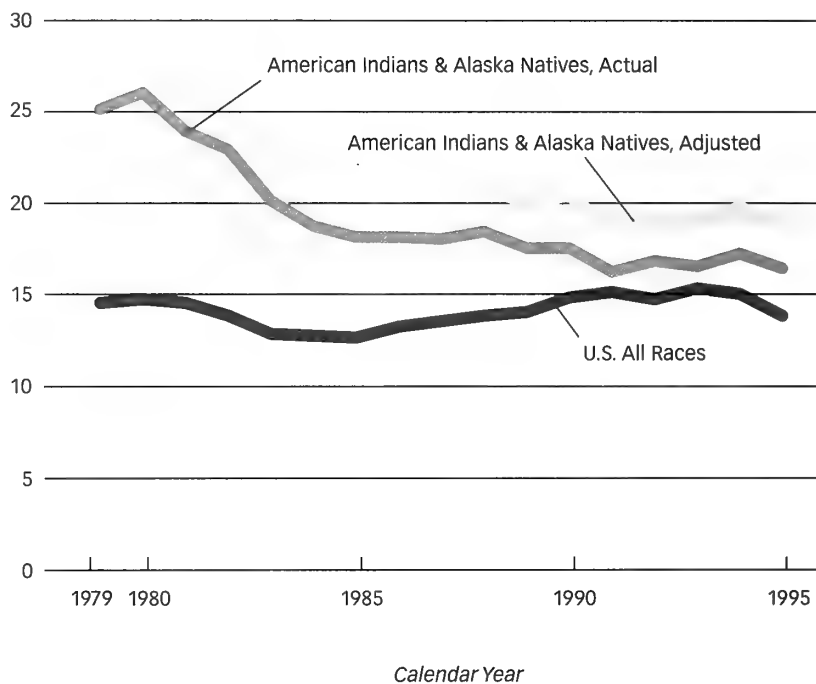
**Note:** — Represents zero.

## CHART 26

### Age-Adjusted Firearm Injury Death Rates

The Indian age-adjusted firearm injury death rate has decreased 35 percent since 1978-80 (unadjusted rates). Both the U.S. All Races and White rates have decreased since 1979 (5 percent and 7 percent, respectively). The 1994-96 Indian rate (18.9) is 36 percent greater than the 1995 U.S. All Races rate (13.9) and 67 percent greater than the 1995 U.S. White rate (11.3). The 1994-96 Indian rate is adjusted for misreporting of Indian deaths on state death certificates.

Per 100,000 Population





**TABLE 26****Firearm Injury<sup>1</sup> Deaths and Death Rates**

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1979-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S.		Ratio of American Indian and Alaska Native to:			
	Number		Rate		All Races	White	U.S. All Races		U.S. White	
	Actual	Adjusted	Actual	Adjusted			Actual	Adjusted	Actual	Adjusted
(1996)	188	214								
1994-1996 (1995)	227	261	16.5	18.9	13.9	11.3	1.2	1.4	1.5	1.7
1993-1995 (1994)	230	264	17.3	19.8	15.1	11.9	1.1	1.3	1.5	1.7
1992-1994 (1993)	204	232	16.6	19.0	15.4	12.5	1.1	1.2	1.3	1.5
1991-1993 (1992)	181	204	16.9	19.2	14.8	12.3	1.1	1.3	1.4	1.6
1990-1992 (1991)	221	253	16.3	18.7	15.2	12.5	1.1	1.2	1.3	1.5
1989-1991 (1990)	172	200	17.6	20.4	14.9	12.6	1.2	1.4	1.4	1.6
1988-1990 (1989)	215	252	17.6	20.0	14.1	12.1	1.2	1.4	1.5	1.7
1987-1989 (1988)	205	227	18.5	20.8	13.9	12.1	1.3	1.5	1.5	1.7
1986-1988 (1987)	182	203	18.1		13.6	12.1	1.3		1.5	
1985-1987 (1986)	186		18.2		13.3	11.7	1.4		1.6	
1984-1986 (1985)	186		18.2		12.7	11.4	1.4		1.6	
1983-1985 (1984)	169		18.8		12.8	11.6	1.5		1.6	
1982-1984 (1983)	185		20.2		12.9	11.5	1.6		1.8	
1981-1983 (1982)	210		23.0		13.9	12.2	1.7		1.9	
1980-1982 (1981)	210		24.0		14.6	12.5	1.6		1.9	
1979-1981 (1980)	195		26.1		14.8	12.4	1.8		2.1	
1978-1980 (1979)	229		25.2		14.6	12.2	1.7		2.1	
(1978)	176									

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of Indian race on state death certificates.

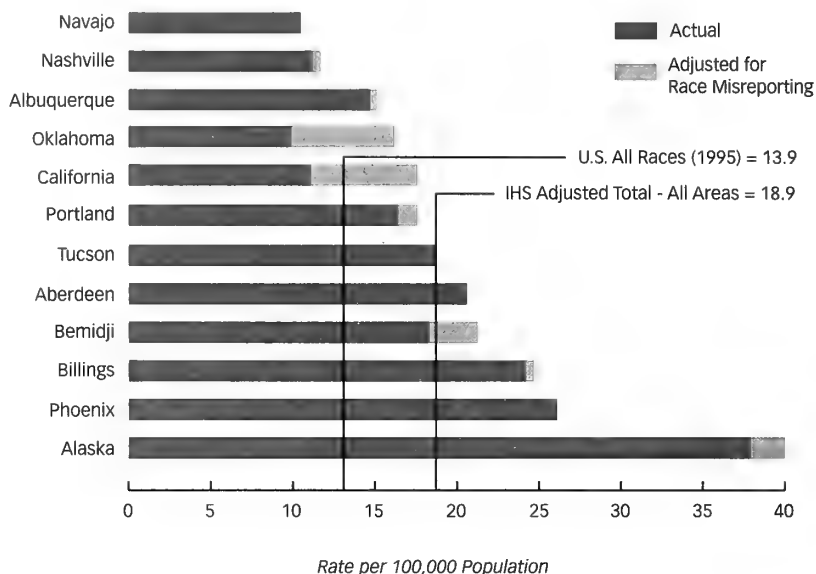
<sup>1</sup> Includes death with ICD-9 codes; Accident caused by firearm missile-E922, Suicide and self-inflicted injury by firearms-E955.0-E955.4, Assault by firearms and legal intervention-E965.0-E965.4, E970, and Injury by firearms, undetermined whether accidentally or purposely inflicted-E985.0-E985.4. Injury by firearms causes exclude explosive and other causes indirectly related to firearms. Includes ICD-8 codes; E922, E955, E965, E970 and E985 (1978 only).

**Source:** U.S. All Races and White Mortality Data: Advance Report on Final Mortality Statistics, 1993, NCHS, DHHS, Report Vol.44, No. 7, Supplement, February 29, 1996, Table 11. Data not published for the U.S. populations prior to 1979.

**CHART 27**

Age-Adjusted Firearm  
Injury Death Rates  
(1994-1996)

The Indian age-adjusted firearm injury death rate varies considerably among the IHS Areas. The highest Area rate (Alaska, 40.0) is nearly 4 times the lowest Area rate (Navajo, 10.5). The only Area, besides Navajo, to have a rate below the U.S. All Races rate is Nashville (11.7). These Indian rates are adjusted for misreporting of Indian deaths on state death certificates.

**TABLE 27**

Age-Adjusted Firearm  
Injury Death Rates  
(1994-1996)

	Deaths		Rate <sup>2</sup>	
	Actual	Adj <sup>3</sup>	Actual	Adj <sup>3</sup>
U.S. All Races (1995)	35,957		13.9	
All IHS Areas	645	739	16.5	18.9
Aberdeen	49	49	20.6	20.6
Alaska	106	112	37.9	40.0
Albuquerque	31	32	14.7	15.1
Bemidji	36	42	18.3	21.3
Billings	35	36	24.2	24.8
California	39	62	11.1	17.6
Nashville	23	24	11.2	11.7
Navajo	62	62	10.5	10.5
Oklahoma	79	130	9.9	16.2
Phoenix	103	103	26.1	26.1
Portland	68	73	16.4	17.6
Tucson <sup>3</sup>	14	14	18.7	18.7

<sup>1</sup> Includes deaths with ICD-9 codes: Accident caused by firearm missile-E922, Suicide and self-inflicted injury by firearms-E955.0-E955.4, Assault by firearms and legal intervention-E965.0-E965.4, E970, and Injury by firearms, undetermined whether accidentally or purposely inflicted-E985.0-E985.4. Injury by firearm causes exclude explosive and other causes indirectly related to firearms.

<sup>2</sup> Age-adjusted rate per 100,000 population. Rates based on a small number of deaths should be interpreted with caution.

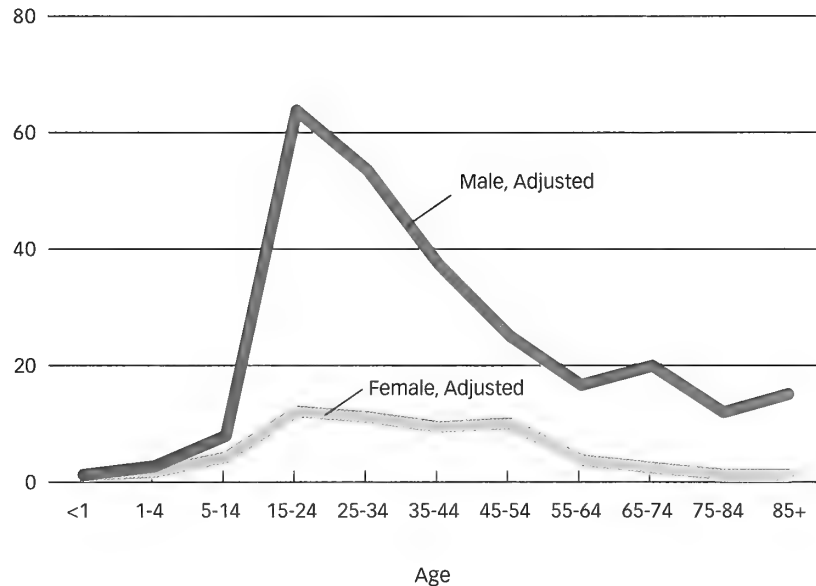
<sup>3</sup> Adjusted to compensate for misreporting of Indian race on state death certificates.

## CHART 28

### Firearm Injury Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)

The Indian male age-adjusted firearm injury death rate is highest for the 15 to 24 year age group (62.6). This is nearly 6 times the peak for Indian females (10.9) which also occurs in the same age group. The U.S. All Races male rate also is highest for this age group (47.7); it is 24 percent lower than the Indian male rate. The highest U.S. All Races female rate (6.0) also occurs in this age group. These Indian rates have been adjusted for mis-reporting of Indian race on state death certificates.

Per 100,000 Population



**TABLE 28****Firearm Injury<sup>1</sup> Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>2</sup>	Actual	Adj <sup>2</sup>	Actual	Adj <sup>2</sup>
Under 1 year	—	—	—	—	—	—
1-4 years	1.0	1.0	1.5	1.5	0.5	0.5
5-14 years	4.3	4.9	6.0	6.7	2.5	3.0
15-24 years	31.9	37.3	54.5	62.6	8.4	10.9
25-34 years	26.6	30.6	45.8	52.3	8.2	9.9
35-44 years	19.9	22.6	32.5	36.1	8.2	8.2
45-54 years	14.1	16.0	21.8	23.8	7.1	8.8
55-64 years	8.1	8.5	14.4	15.4	2.5	2.5
65-74 years	8.3	9.0	17.1	18.7	1.2	1.2
75-84 years	4.3	4.3	10.7	10.7	—	—
85 years +	5.1	5.1	13.9	13.9	—	—

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	0.2	0.1	0.3
1-4 years	0.6	0.8	0.5
5-14 years	2.0	3.0	0.9
15-24 years	27.3	47.7	6.0
25-34 years	20.2	34.4	5.9
35-44 years	14.4	23.7	5.3
45-54 years	12.2	20.4	4.3
55-64 years	11.4	20.0	3.5
65-74 years	12.9	25.3	3.0
75-84 years	16.4	37.7	2.8
85 years +	14.6	47.4	1.8

U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	1.0	1.0	1.0
1-4 years	0.4	0.5	0.4
5-14 years	1.7	2.5	0.8
15-24 years	18.4	31.5	4.6
25-34 years	15.7	26.2	5.1
35-44 years	13.1	21.3	4.9
45-54 years	11.9	19.6	4.4
55-64 years	11.4	19.9	3.6
65-74 years	13.4	26.1	3.1
75-84 years	17.3	39.8	3.0
85 years +	15.4	50.8	1.8

<sup>1</sup> Includes deaths with ICD-9 codes; Accident caused by firearm missile-E922, Suicide and self-inflicted injury by firearms-E955.0-E955.4, Assault by firearms and legal intervention-E965.0-E965.4, E970, and injury by firearms, undetermined whether accidentally or purposely inflicted-E985.0-E985.4. Injury by firearms causes exclude explosive and other causes indirectly related to firearms.

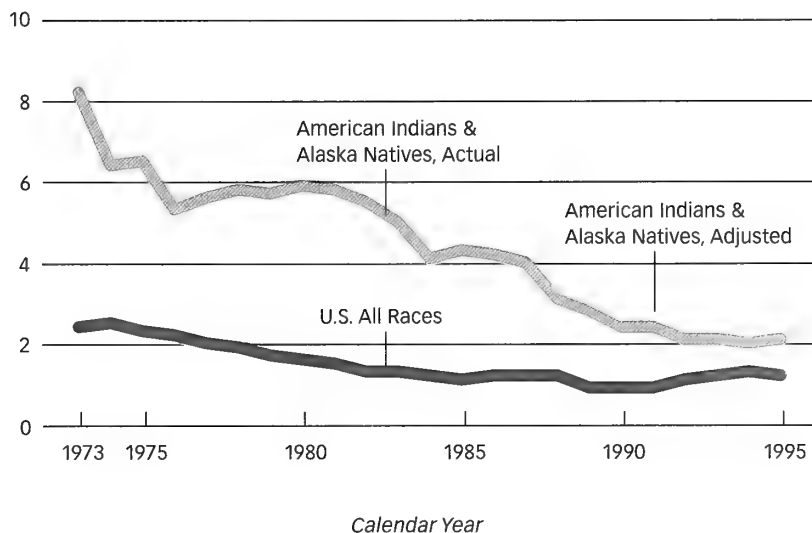
<sup>2</sup> Adjusted to compensate for misreporting of Indian race on state death certificates. **Note:** — Represents zero.

## CHART 29

### Age-Adjusted Other Injury Death Rates

The Indian age-adjusted death rate due to other injuries (undetermined injury and war injury) has decreased 73 percent since 1972-74 (unadjusted rates). Despite this improvement, the 1994-96 Indian rate (2.4) is still at least double the 1995 U.S. All Races and White rates (1.2 and 1.1, respectively). The 1994-96 Indian rate is adjusted for misreporting of Indian deaths on state death certificates.

Per 100,000 Population



**TABLE 29****Other Injury<sup>1,2</sup> Deaths and Death Rates**

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1995  
(Age-Adjusted Rate per 100,000 Population)

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races	U.S. White	Ratio of American Indian and Alaska Native to:			
	Number		Rate				U.S. All Races		U.S. White	
	Actual	Adjusted	Actual	Adjusted			Actual	Adjusted	Actual	Adjusted
(1996)	29	34								
1994-1996 (1995)	30	31	2.2	2.4	1.2	1.1	1.8	2.0	2.0	2.2
1993-1995 (1994)	24	28	2.1	2.2	1.3	1.2	1.6	1.7	1.8	1.8
1992-1994 (1993)	24	25	2.2	2.4	1.2	1.1	1.8	2.0	2.0	2.2
1991-1993 (1992)	31	34	2.2	2.3	1.1	1.0	2.0	2.1	2.2	2.3
1990-1992 (1991)	26	27	2.5	2.7	0.9	0.8	2.8	3.0	3.1	3.4
1989-1991 (1990)	31	33	2.5	2.6	0.9	0.8	2.8	2.9	3.1	3.3
1988-1990 (1989)	28	29	2.9	3.0	0.9	0.8	3.2	3.3	3.6	3.8
1987-1989 (1988)	34	35	3.2	3.3	1.2	1.0	2.7	2.8	3.2	3.3
1986-1988 (1987)	41	42	4.1		1.2	1.0	3.4		4.1	
1985-1987 (1986)	50		4.3		1.2	1.1	3.6		3.9	
1984-1986 (1985)	39		4.4		1.1	1.0	4.0		4.4	
1983-1985 (1984)	39		4.2		1.2	1.1	3.5		3.8	
1982-1984 (1983)	40		5.1		1.3	1.1	3.9		4.6	
1981-1983 (1982)	52		5.6		1.3	1.2	4.3		4.7	
1980-1982 (1981)	46		5.9		1.5	1.3	3.9		4.5	
1979-1981 (1980)	39		6.0		1.6	1.4	3.8		4.3	
1978-1980 (1979)	49		5.8		1.7	1.5	2.4		2.7	
1977-1979 (1978)	37		5.9		1.9	1.6	3.1		3.7	
1976-1978 (1977)	38		5.7		2.0	1.6	2.9		3.6	
1975-1977 (1976)	39		5.4		2.2	1.8	2.5		2.2	
1974-1976 (1975)	29		6.6		2.3	1.9	2.9		3.5	
1973-1975 (1974)	50		6.5		2.5	2.1	2.6		3.1	
1972-1974 (1973)	35 <sup>3</sup>		8.3		2.4	2.0	3.5		4.2	
(1972)	46									
1954-1956 (1955)	NA		NA		NA	NA	NA		NA	

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of Indian race on state death certificates.

<sup>1</sup> Includes deaths with ICD-9 codes E980-E989; Injury undetermined whether accidentally or purposely inflicted.

<sup>2</sup> Includes deaths with ICD-9 codes E990-E999; Injury resulting from operations of war.

<sup>3</sup> In 1973 there was one American Indian injury death resulting from operations of war.

For each of the other years shown above there were no American Indian injury deaths due to this cause.

**Note:** NA denotes data not available. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and rates for U.S. populations are for the single year specified.

# CHART 30

## Age-Adjusted Death Rates for Injury and Poisoning Deaths Due to Other Causes (1994-1996)

The Indian age-adjusted death rate for injury and poisoning deaths due to other causes is highest in Billings and lowest in Tucson among the IHS Areas. Albuquerque and Nashville Areas had no deaths. The Billings Area rate (5.0) is over 4 times the U.S. All Races rate (1.2), while the Tucson rate (1.2) is the same as the U.S. All Races rate. The IHS Area rates should be interpreted with caution because of the small number of deaths involved. These Indian rates are adjusted for misreporting of Indian deaths on state death certificates.

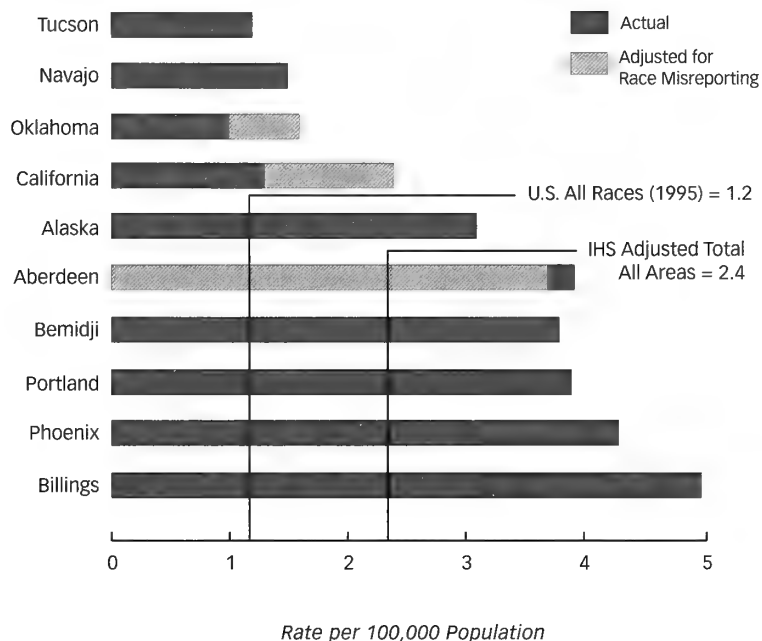


TABLE 30

## Age-Adjusted Death Rates for Injury and Poisoning Deaths Due to Other Causes (1994-1996)

	Deaths		Rate <sup>2</sup>	
	Actual	Adj <sup>3</sup>	Actual	Adj <sup>3</sup>
U.S. All Races (1995)	3,310		1.2	
All IHS Areas	84	92	2.2	2.4
Aberdeen	9 <sup>4</sup>	8 <sup>4</sup>	3.9 <sup>4</sup>	3.7 <sup>4</sup>
Alaska	8	8	3.1	3.1
Albuquerque	—	—	—	—
Bemidji	7	7	3.8	3.8
Billings	7	7	5.0	5.0
California	5	9	1.3	2.4
Nashville	—	—	—	—
Navajo	9	9	1.5	1.5
Oklahoma	8	13	1.0	1.6
Phoenix	13	13	4.3	4.3
Portland	17	17	3.9	3.9
Tucson	1	1	1.2	1.2

— Represents zero.

<sup>1</sup> Includes the following ICD-9 cause of death groups combined: Injury undetermined whether accidentally or purposely inflicted-E980-E989. Injury resulting from operations of war-E990-E999. (There were 9 deaths due to this cause for the U.S. All Races during 1995 and 0 deaths for the American Indian and Alaska Native population in the IHS service area, 1994-96).

<sup>2</sup> Age-adjusted rate per 100,000 population. Rates based on a small number of deaths should be interpreted with caution.

<sup>3</sup> Adjusted to compensate for misreporting of Indian race on state death certificates.

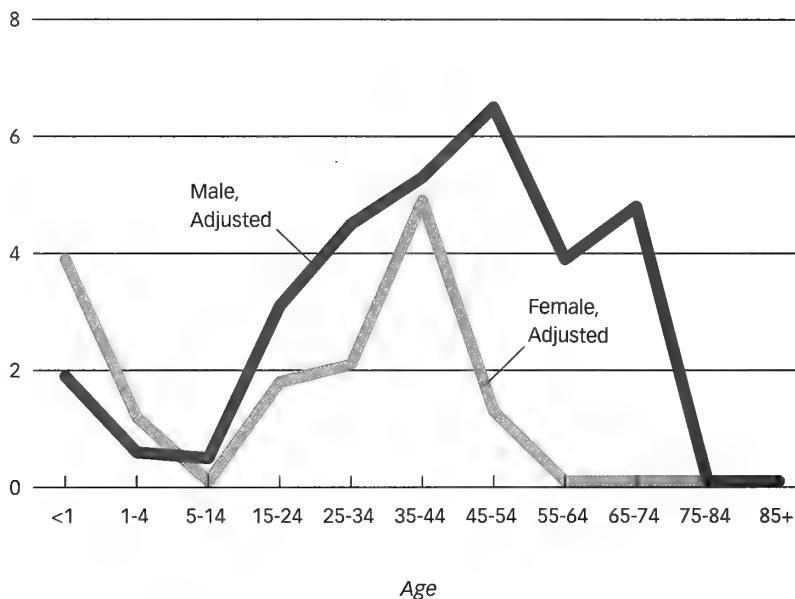
<sup>4</sup> The adjusted number and rate (Aberdeen Area) is lower than the unadjusted number and rate because the linked birth/infant death file (used to obtain the adjusted counts for infant deaths) had 1 less death for this cause than did the actual mortality file (1994-96 data).

## CHART 31

### Other Injury Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)

Deaths due to other injuries (undetermined injury and war injury) occur more frequently in males than females in all 10 year age groups 5 years and over. The highest Indian male rate (6.4) occurs in the 45 to 54 year age group. For U.S. All Races males, it occurs in 35 to 44 year age group (4.2). The highest Indian female rate (4.8) occurs in the 35 to 44 year age group, whereas for U.S. All Races females, the highest rate (1.5) is for age group under 1 year. These Indian rates are adjusted for misreporting of Indian deaths on state death certificates.

Per 100,000 Population





**TABLE 31****Other Injury Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	3.7 <sup>2</sup>	2.8 <sup>2</sup>	1.8	1.8	5.6 <sup>2</sup>	3.8 <sup>2</sup>
1-4 years	0.5	0.8	0.5	0.5	0.5	1.1
5-14 years	0.2	0.2	0.4	0.4	—	—
15-24 years	1.8	2.3	2.7	3.0	0.8	1.7
25-34 years	2.7	3.2	3.8	4.4	1.7	2.0
35-44 years	4.8	5.0	5.2	5.2	4.5	4.8
45-54 years	3.7	3.7	6.4	6.4	1.2	1.2
55-64 years	1.8	1.8	3.8	3.8	—	—
65-74 years	2.1	2.1	4.7	4.7	—	—
75-84 years	—	—	—	—	—	—
85 years +	—	—	—	—	—	—

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	1.5	1.4	1.5
1-4 years	0.3	0.4	0.2
5-14 years	0.1	0.2	0.0
15-24 years	1.0	1.7	0.3
25-34 years	1.9	2.8	1.0
35-44 years	2.7	4.2	1.1
45-54 years	1.5	2.2	0.8
55-64 years	0.7	0.9	0.5
65-74 years	0.5	0.8	0.4
75-84 years	0.8	1.3	0.4
85 years +	1.6	3.0	1.0

U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	1.1	1.0	1.2
1-4 years	0.2	0.2	0.2
5-14 years	0.1	0.2	0.0
15-24 years	0.9	1.5	0.3
25-34 years	1.8	2.7	0.9
35-44 years	2.4	3.8	1.0
45-54 years	1.3	1.8	0.7
55-64 years	0.7	0.8	0.5
65-74 years	0.5	0.6	0.4
75-84 years	0.8	1.3	0.4
85 years +	1.4	2.5	1.0

<sup>1</sup> Adjusted to compensate for misreporting of Indian race on state death certificates.

<sup>2</sup> The actual file contained 3 female infant deaths, while the adjusted file (linked birth/infant death file) contained 2 female infant deaths for this cause of death group.

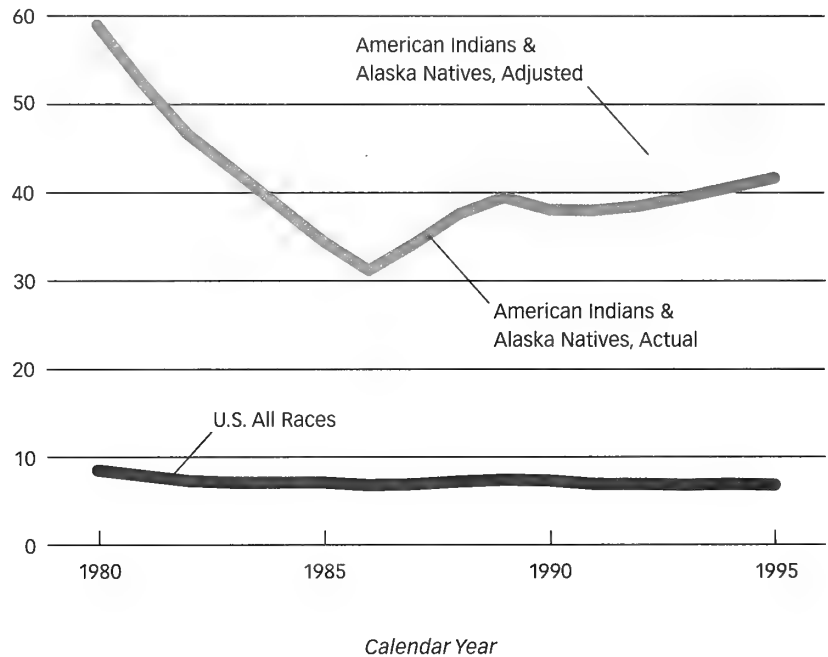
**Note:** — Represents zero. 0.0 rounds to zero.

## CHART 32

### Age-Adjusted Alcoholism Death Rates

Problem drinking is associated with injuries. For 1994-96, the Indian population has an age-adjusted alcoholism death rate (48.7) that is 7.3 times the U.S. All Races rate (6.7) and 7.9 times the U.S. White rate (6.2). Between 1979-81 and 1985-87, the Indian rate decreased 47 percent. However, since 1985-87, it has increased 25 percent (unadjusted rates). The 1994-96 Indian rate is adjusted for misreporting of Indian deaths on state death certificates.

Per 100,000 Population



**TABLE 32****Alcoholism Deaths and Death Rates**

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1979-1995  
Age-Adjusted Rate per 100,000 Population

Calendar Year(s)	American Indian and Alaska Native				U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native to:			
	Number		Rate				U.S. All Races		U.S. White	
	Actual	Adjusted	Actual	Adjusted			Actual	Adjusted	Actual	Adjusted
(1996)	456	527								
1994-1996 (1995)	460	543	41.6	48.7	6.7	6.2	6.2	7.3	6.7	7.9
1993-1995 (1994)	427	494	40.5	47.4	6.8	6.2	6.0	7.0	6.5	7.6
1992-1994 (1993)	395	458	39.4	45.5	6.7	6.1	5.9	6.8	6.5	7.5
1991-1993 (1992)	402	458	38.4	44.2	6.8	6.1	5.6	6.5	6.3	7.2
1990-1992 (1991)	367	417	37.9	43.4	6.8	6.0	5.6	6.4	6.3	7.2
1989-1991 (1990)	350	403	38.0	43.8	7.2	6.2	5.3	6.1	6.1	7.1
1988-1990 (1989)	376	436	39.4	45.9	7.3	6.2	5.4	6.3	6.4	7.4
1987-1989 (1988)	375	441	37.5	44.0	7.1	5.9	5.3	6.2	6.4	7.5
1986-1988 (1987)	264	310	34.1		6.8	5.8	5.0		5.9	
1985-1987 (1986)	264		31.1		6.7	5.7	4.6		5.5	
1984-1986 (1985)	274		34.4		7.0	5.8	4.9		5.9	
1983-1985 (1984)	302		38.5		7.0	5.9	5.5		6.5	
1982-1984 (1983)	295		42.6		7.0	6.0	6.1		7.1	
1981-1983 (1982)	293		46.6		7.2	6.2	6.5		7.5	
1980-1982 (1981)	344		52.4		7.8	6.6	6.7		7.9	
1979-1981 (1980)	369		59.0		8.4	6.9	7.0		8.6	
(1979)	377									

Adjusted—specifies a number, rate, or ratio of rates adjusted to compensate for misreporting of Indian race on state death certificates.

**Note:** For all years presented above, the causes of death that define alcoholism deaths have been expanded to include alcoholic polyneuropathy-357.5 and the entire code group for accidental poisoning by alcohol-E860, as defined by the National Center for Health Statistics, DHHS, for all years in which ICD-9 codes are employed (1979 to the present). For a complete description of the causes of death that define deaths due to alcoholism, refer to the Glossary of ICD-9 Codes. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths for the Indian population and rates for U.S. populations are for the single year specified.

### CHART 33

#### Age-Adjusted Alcoholism Death Rates

The Aberdeen Area age-adjusted alcoholism death rate (108.7) is over 16 times the U.S. All Races rate (6.7). It is 51 percent greater than the second highest IHS Area rate (Alaska and Phoenix, 72.1). The lowest IHS Area rate occurs in Oklahoma (21.7), but this is still 3.2 times the U.S. All Races rate. These Indian rates are adjusted for misreporting of Indian deaths on state death certificates.

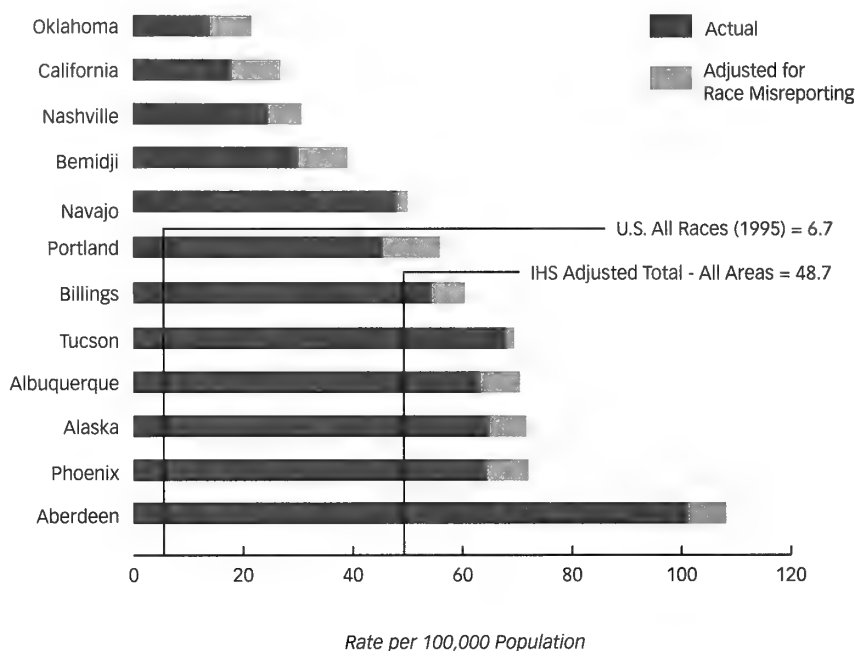


TABLE 33

#### Age-Adjusted Alcoholism Death Rates (1994-1996)

	Deaths		Rate <sup>1</sup>	
	Actual	Adj <sup>2</sup>	Actual	Adj <sup>2</sup>
U.S. All Races (1995)	20,231		6.7	
All IHS Areas	1,343	1,564	41.6	48.7
Aberdeen	181	194	101.2	108.7
Alaska	141	156	64.9	72.1
Albuquerque	111	123	63.3	70.7
Bemidji	50	65	30.1	39.2
Billings	62	69	54.4	60.6
California	53	79	18.0	27.0
Nashville	43	54	24.6	30.8
Navajo	218	227	48.1	50.1
Oklahoma	102	158	14.0	21.7
Phoenix	190	212	64.4	72.1
Portland	149	183	45.5	56.0
Tucson	43	44	68.0	70.0

<sup>1</sup> Age-adjusted rate per 100,000 population.

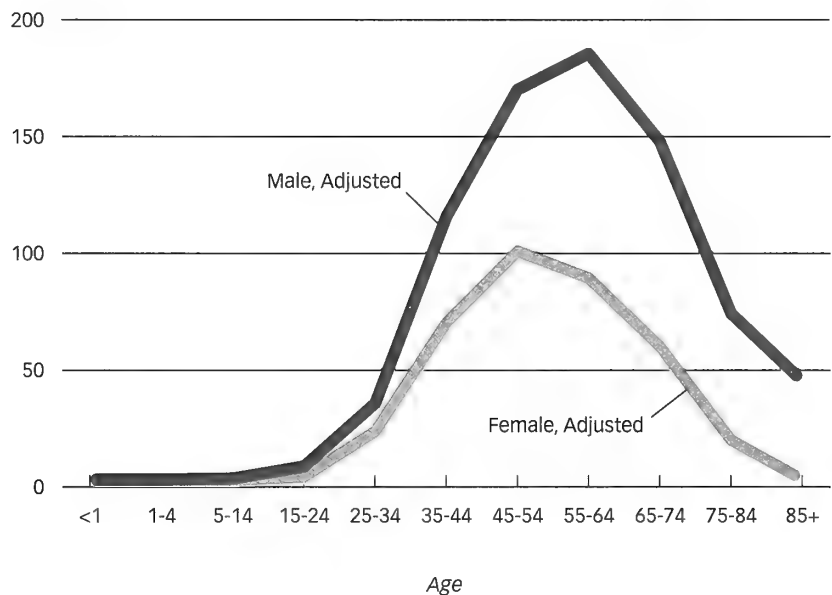
<sup>2</sup> Adjusted to compensate for misreporting of Indian race on state death certificates.

## CHART 34

### Alcoholism Death Rates by Age and Sex, American Indians and Alaska Natives (1994-1996)

The highest Indian male alcoholism death rate (182.6) occurs in the 55 to 64 year age group. This is 5 times the U.S. All Races male peak rate (36.4 for 55 to 64 years). The Indian female highest rate (97.8 for 45 to 54 years) is 46 percent less than the Indian male peak rate, but it is over 10 times the U.S. All Races female peak rate (9.5 for 55 to 64 years). These Indian rates have been adjusted for mis-reporting of Indian race on state death certificates.

Per 100,000 Population



**TABLE 34****Alcoholism Death Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1994-1996, and U.S. All Races and White Populations, 1995  
(Rate per 100,000 Population)

American Indian and Alaska Native						
Age Group	Both Sexes		Male		Female	
	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>	Actual	Adj <sup>1</sup>
Under 1 year	—	—	—	—	—	—
1-4 years	—	—	—	—	—	—
5-14 years	0.2	0.2	0.4	0.4	—	—
15-24 years	3.2	3.4	5.4	5.6	0.8	1.1
25-34 years	24.0	26.5	30.9	32.6	17.5	20.6
35-44 years	76.7	89.1	99.9	112.6	54.9	67.2
45-54 years	109.8	131.0	143.9	167.1	78.4	97.8
55-64 years	109.6	131.1	151.9	182.6	72.8	86.2
65-74 years	84.0	95.7	126.2	144.9	50.6	56.8
75-84 years	34.3	38.6	60.4	71.0	16.7	16.7
85 years +	15.3	15.3	41.8	41.8	—	—

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	0.1	0.1	0.1
1-4 years	—	—	—
5-14 years	0.0	0.0	0.0
15-24 years	0.3	0.5	0.1
25-34 years	2.1	3.0	1.1
35-44 years	9.8	14.8	4.9
45-54 years	17.5	27.9	7.5
55-64 years	22.3	36.4	9.5
65-74 years	19.0	32.6	8.1
75-84 years	11.1	20.8	4.9
85 years +	5.3	12.7	2.4

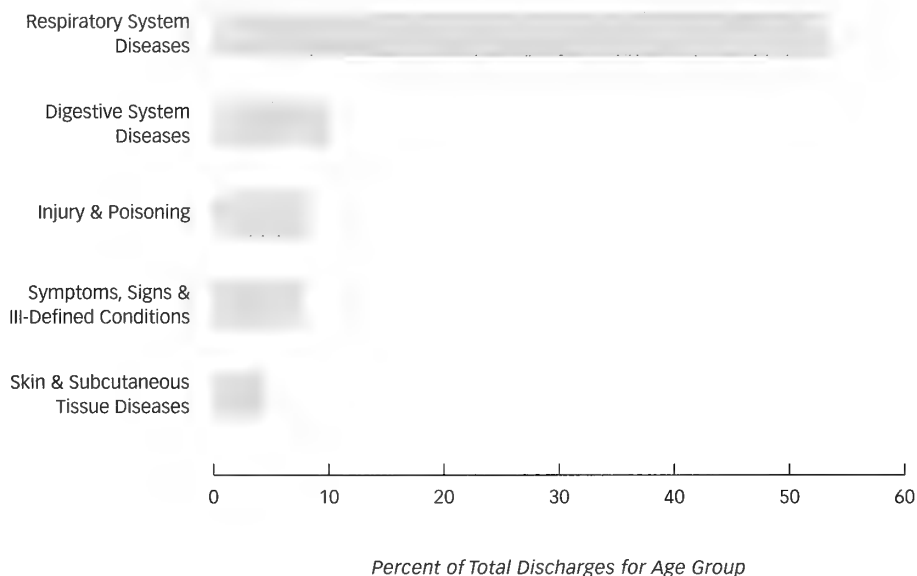
U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	0.1	0.1	0.2
1-4 years	—	—	—
5-14 years	0.0	0.0	—
15-24 years	0.3	0.4	0.1
25-34 years	1.9	2.8	1.0
35-44 years	8.9	13.6	4.1
45-54 years	15.7	25.0	6.6
55-64 years	20.4	33.1	8.6
65-74 years	17.9	30.6	7.6
75-84 years	10.9	20.5	4.8
85 years +	5.0	12.0	2.3

<sup>1</sup> Adjusted to compensate for misreporting of Indian race on state death certificates. **Note:** — Represents zero. 0.0 rounds to zero.

# CHART 35

## Leading Causes of Hospitalization: Ages 1 to 4 years, IHS and Tribal Direct and Contract Hospitals, FY 1997

Injury and poisoning is the third leading cause of hospitalization for Indian patients, 1 to 4 years of age. Nine percent of all discharges for this Indian age group pertain to injury and poisoning.



# TABLE 35

## Ten Leading Causes of Hospitalization for GM&S Patients 1 to 4 Years of Age

Indian Health Service and Tribal Direct and Contract General Hospitals, FY 1997

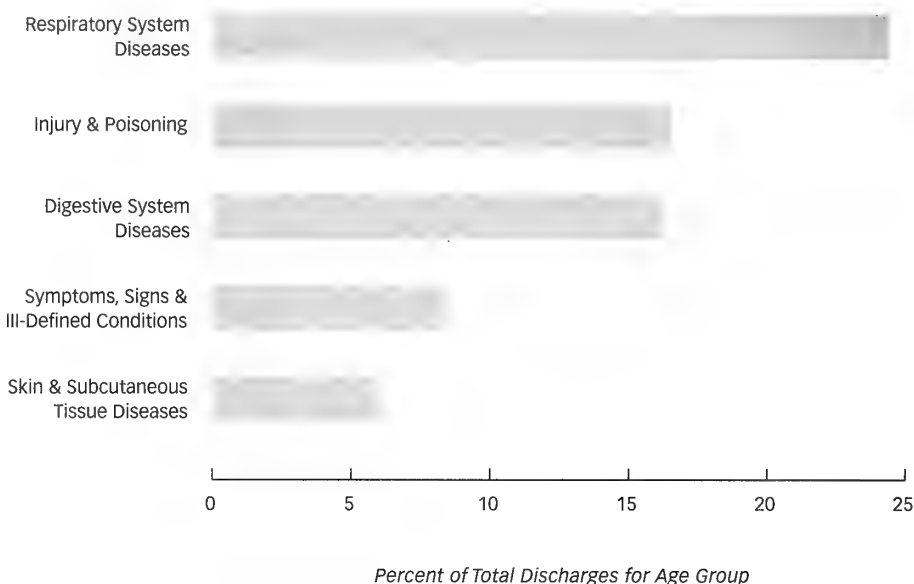
Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	3,525	1,841	1,684	100.0	52.2	47.8
Respiratory system diseases	1,872	991	881	53.1	53.8	52.3
Digestive system diseases	356	177	179	10.1	9.6	10.6
Injury & Poisoning	300	174	126	8.5	9.5	7.5
Symptoms, signs & ill-defined conditions	277	154	123	7.9	8.4	7.3
Skin and subcutaneous tissue diseases	158	77	81	4.5	4.2	4.8
Infectious and parasitic diseases	135	69	66	3.8	3.7	3.9
Nervous system & sense organ diseases	101	58	43	2.9	3.2	2.6
Endocrine, nutritional & metabolic disorders	99	55	44	2.8	3.0	2.6
Genitourinary system diseases	98	22	76	2.8	1.2	4.5
Blood and blood-forming organ diseases	36	19	17	1.0	1.0	1.0
All other	93	45	48	2.6	2.4	2.9

Sources: Direct: On-request Report 21  
Contract: On-request Report 19

## CHART 36

Leading Causes of Hospitalization:  
Ages 5 to 14 years,  
IHS and Tribal Direct  
and Contract Hospitals,  
FY 1997

Injury and poisoning is the second leading cause of hospitalization for Indian patients, 5 to 14 years of age. Seventeen percent of all discharges for this Indian age group pertain to injury and poisoning.



## TABLE 36

Ten Leading Causes of Hospitalization for GM&S Patients 5 to 14 Years of Age

Indian Health Service and Tribal Direct and Contract General Hospitals, FY 1997

Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	3,995	2,078	1,917	100.0	52.0	48.0
Respiratory system diseases	973	518	455	24.4	24.9	23.7
Injury & Poisoning	659	391	268	16.5	18.8	14.0
Digestive system diseases	646	363	283	16.2	17.5	14.8
Symptoms, signs & ill-defined conditions	334	171	163	8.4	8.2	8.5
Skin and subcutaneous tissue diseases	240	137	103	6.0	6.6	5.4
Infectious and parasitic diseases	205	112	93	5.1	5.4	4.9
Endocrine, nutritional & metabolic disorders	186	97	89	4.7	4.7	4.6
Genitourinary system diseases	162	34	128	4.1	1.6	6.7
Mental disorders	154	74	80	3.9	3.6	4.2
Nervous system & sense organ diseases	134	66	68	3.4	3.2	3.5
All other	302	115	187	7.6	5.5	9.8

Sources: Direct: On-request Report 21

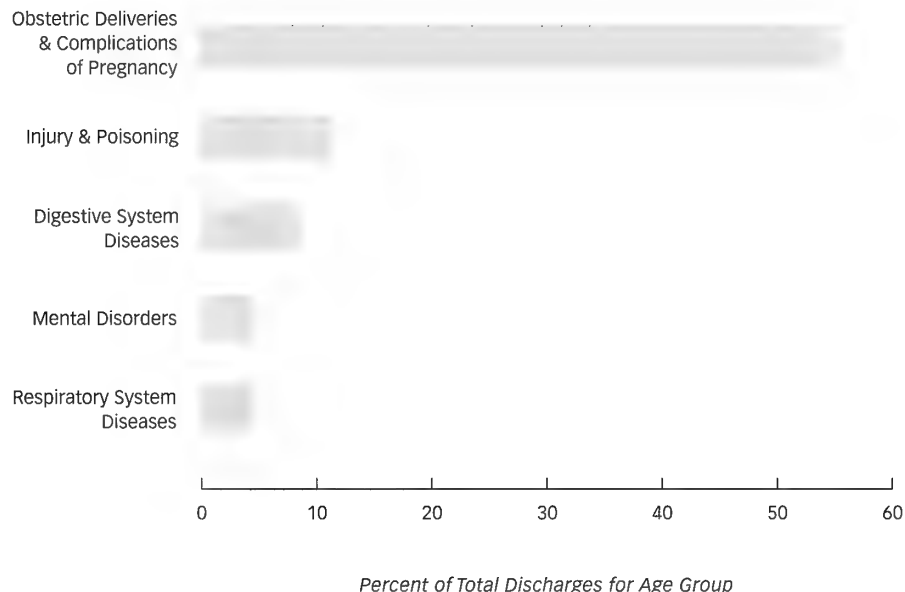
Contract: On-request Report 19



### CHART 37

#### Leading Causes of Hospitalization: Ages 15 to 24 years, IHS and Tribal Direct and Contract Hospitals, FY 1997

Injury and poisoning is the second leading cause of hospitalization for Indian patients, 15 to 24 years of age. Twelve percent of all discharges for this Indian age group pertain to injury and poisoning.



### TABLE 37

#### Ten Leading Causes of Hospitalization for GM&S Patients 15 to 24 Years of Age

Indian Health Service and Tribal Direct and Contract General Hospitals, FY 1997

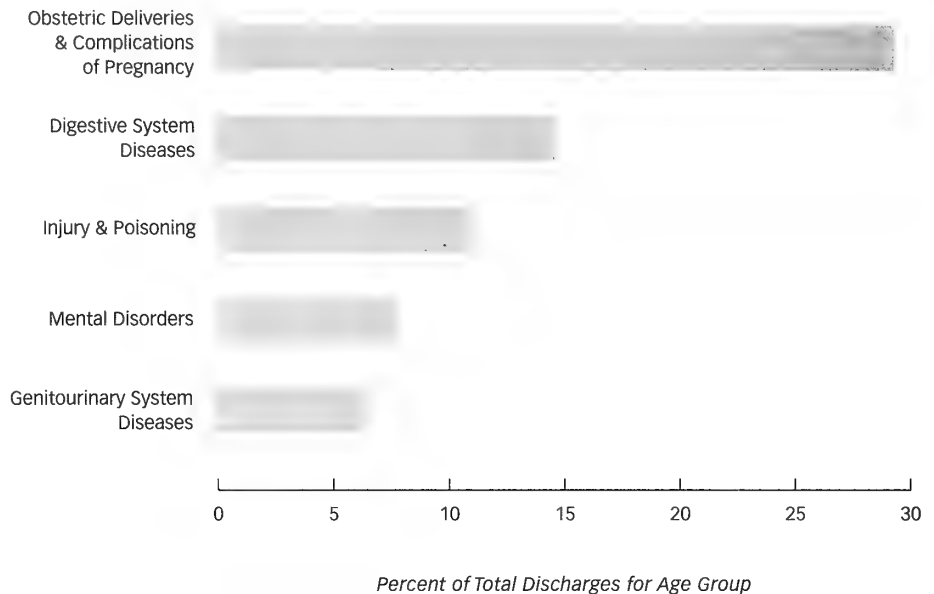
Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	12,871	2,549	10,322	100.0	19.8	80.2
Obstetric deliveries and complications of pregnancy & puerperium	7,129	0	7,129	55.4	0.0	69.1
Injury & Poisoning	1,485	909	576	11.5	35.7	5.6
Digestive system diseases	1,089	333	756	8.5	13.1	7.3
Mental disorders	598	308	290	4.6	12.1	2.8
Respiratory system diseases	563	239	324	4.4	9.4	3.1
Genitourinary system diseases	467	45	422	3.6	1.8	4.1
Symptoms, signs & ill-defined conditions	330	130	200	2.6	5.1	1.9
Skin and subcutaneous tissue diseases	261	152	109	2.0	6.0	1.1
Endocrine, nutritional & metabolic disorders	212	120	92	1.6	4.7	0.9
Supplementary classification	183	53	130	1.4	2.1	1.3
All other	554	260	294	4.3	10.2	2.8

Sources: Direct: On-request Report 21  
Contract: On-request Report 19

### CHART 38

Leading Causes of Hospitalization:  
Ages 25 to 44 years,  
IHS and Tribal Direct  
and Contract Hospitals,  
FY 1997

Injury and poisoning is the third leading cause of hospitalization for Indian patients, 25 to 44 years of age. Eleven percent of all discharges for this Indian age group pertain to injury and poisoning.



### TABLE 38

Ten Leading Causes of Hospitalization for GM&S Patients 25 to 44 Years of Age  
Indian Health Service and Tribal Direct and Contract General Hospitals, FY 1997

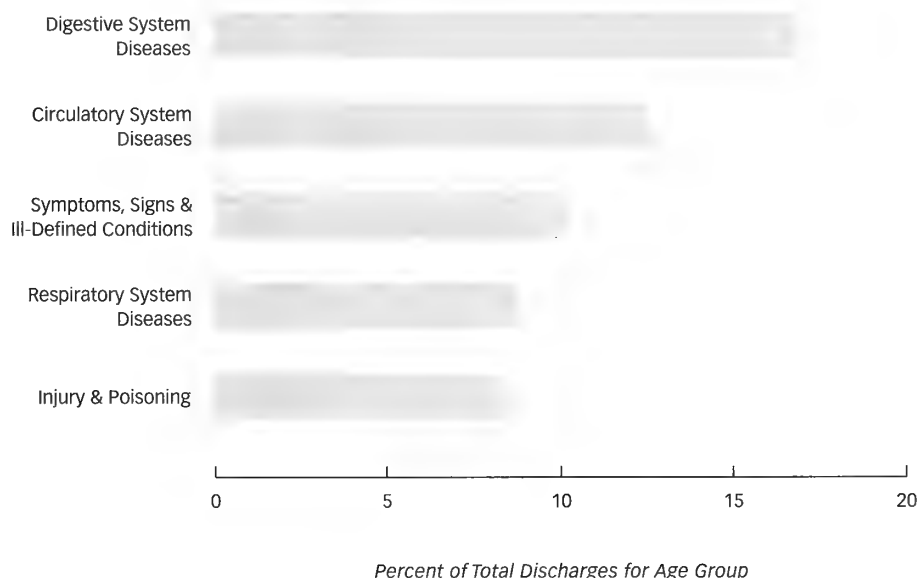
Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	24,470	8,315	16,155	100.0	34.0	66.0
				100.0	100.0	100.0
Obstetric deliveries and complications of pregnancy & puerperium	7,178	0	7,178	29.3	0.0	44.4
Digestive system diseases	3,562	1,453	2,109	14.6	17.5	13.1
Injury & poisoning	2,699	1,665	1,034	11.0	20.0	6.4
Mental disorders	1,913	1,258	655	7.8	15.1	4.1
Genitourinary system diseases	1,561	231	1,330	6.4	2.8	8.2
Symptoms, signs & ill-defined conditions	1,309	636	673	5.3	7.6	4.2
Respiratory system diseases	1,262	552	710	5.2	6.6	4.4
Skin and subcutaneous tissue diseases	974	574	400	4.0	6.9	2.5
Endocrine, nutritional & metabolic disorders	885	510	375	3.6	6.1	2.3
Circulatory system diseases	689	412	277	2.8	5.0	1.7
All other	2,438	1,024	1,414	10.0	12.3	8.8

Sources: Direct: On-request Report 21  
Contract: On-request Report 19

### CHART 39

#### Leading Causes of Hospitalization: Ages 45 to 54 years, IHS and Tribal Direct and Contract Hospitals, FY 1997

Injury and poisoning is the fifth leading cause of hospitalization for Indian patients, 45 to 54 years of age. Nine percent of all discharges for this Indian age group pertain to injury and poisoning.



### TABLE 39

#### Ten Leading Causes of Hospitalization for GM&S Patients 45 to 54 Years of Age

Indian Health Service and Tribal Direct and Contract General Hospitals, FY 1997

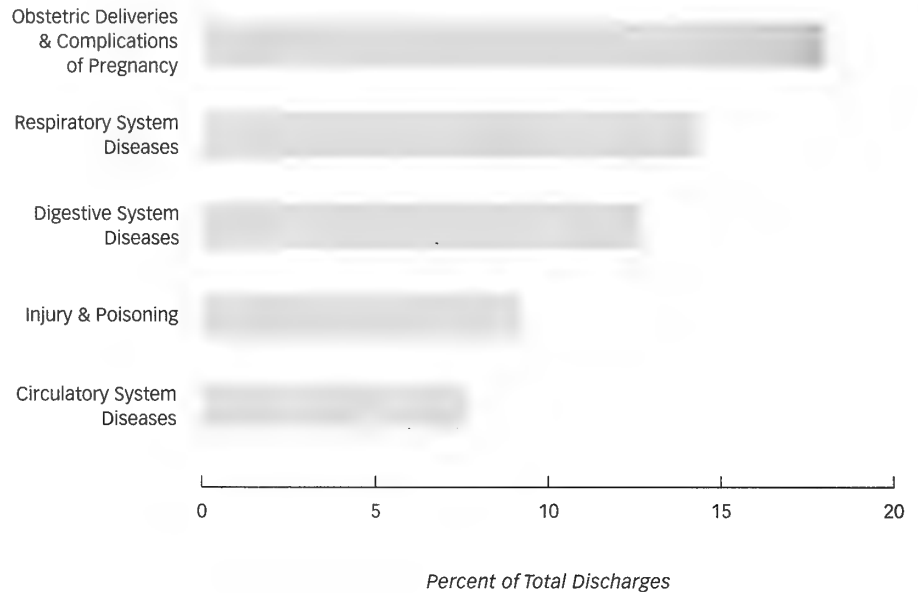
Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	8,809	4,082	4,727	100.0	46.3	53.7
Digestive system diseases	1,493	678	815	16.9	16.6	17.2
Circulatory system diseases	1,114	688	426	12.6	16.9	9.0
Symptoms, signs & ill-defined conditions	891	406	485	10.1	9.9	10.3
Respiratory system diseases	765	283	482	8.7	6.9	10.2
Injury & poisoning	753	420	333	8.5	10.3	7.0
Genitourinary system diseases	732	168	564	8.3	4.1	11.9
Endocrine, nutritional & metabolic disorders	639	287	352	7.3	7.0	7.4
Skin and subcutaneous tissue diseases	550	298	252	6.2	7.3	5.3
Mental disorders	470	316	154	5.3	7.7	3.3
Neoplasms	427	97	330	4.8	2.4	7.0
All other	975	441	534	11.1	10.8	11.3

Sources: Direct: On-request Report 21  
Contract: On-request Report 19

# CHART 40

Leading Causes  
of Hospitalization,  
IHS and Tribal Direct  
and Contract Hospitals,  
FY 1997

Injury and poisoning is  
the fourth leading cause  
of hospitalization for  
Indian patients (all ages).  
Nine percent of all Indian  
discharges pertain to  
injury and poisoning.



# TABLE 40

Ten Leading Causes of Hospitalization for GM&S Patients by Sex

Indian Health Service and Tribal Direct and Contract General Hospitals, FY 1997

Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	79,663	30,747	48,916	100.0	38.6	61.4
				100.0	100.0	100.0
Obstetric deliveries and complications of pregnancy & puerperium	14,365	0	14,365	18.0	0.0	29.4
Respiratory system diseases	11,423	5,523	5,900	14.3	18.0	12.1
Digestive system diseases	10,154	4,349	5,805	12.7	14.1	11.9
Injury & poisoning	7,358	4,155	3,203	9.2	13.5	6.5
Circulatory system diseases	6,045	2,955	3,090	7.6	9.6	6.3
Symptoms, signs & ill-defined conditions	5,721	2,656	3,065	7.2	8.6	6.3
Genitourinary system diseases	4,561	998	3,563	5.7	3.2	7.3
Endocrine, nutritional & metabolic disorders	3,733	1,761	1,972	4.7	5.7	4.0
Mental disorders	3,564	2,254	1,310	4.5	7.3	2.7
Skin & subcutaneous tissue diseases	3,147	1,700	1,447	4.0	5.5	3.0
All other	9,592	4,396	5,196	12.0	14.3	10.6

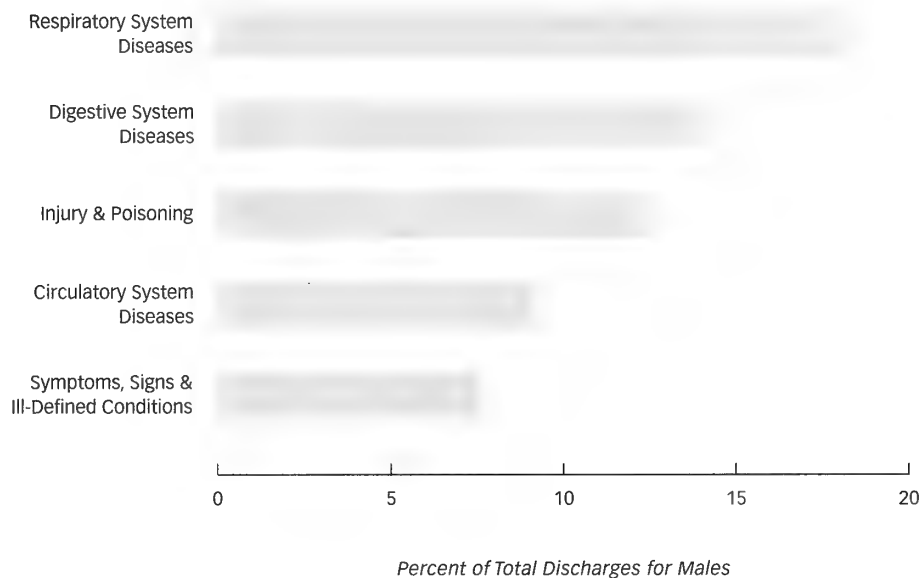
**Note:** Due to updated data, the percentages in this table are slightly different from those in the IHS Regional Differences in Indian Health publication.

Sources: Direct: Annual Report 2C Contract: Annual Report 31

#### CHART 41.1

##### Leading Causes of Hospitalization for Males, IHS and Tribal Direct and Contract Hospitals, FY 1997

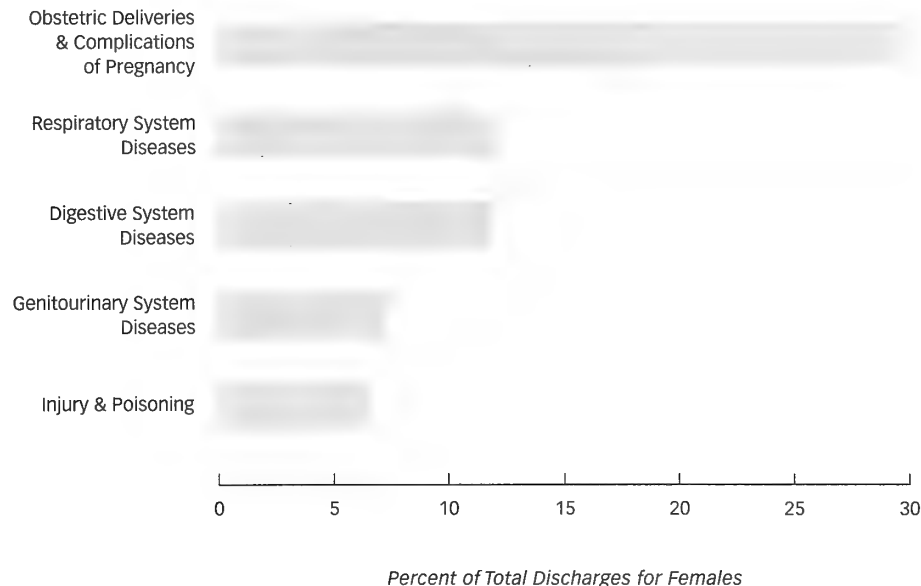
Injury and poisoning is the third leading cause of hospitalization for Indian male patients (all ages). Fourteen percent of all Indian male discharges pertain to injury and poisoning.



#### CHART 41.2

##### Leading Causes of Hospitalization for Females, IHS and Tribal Direct and Contract Hospitals, FY 1997

Injury and poisoning is the fifth leading cause of hospitalization for Indian female patients (all ages). Seven percent of all Indian female discharges pertain to injury and poisoning.



**TABLE 41****Ten Leading Causes of Hospitalization by Sex**

Indian Health Service and Tribal Direct and Contract General Hospitals, Fiscal Year 1997

MALE			FEMALE		
Diagnostic Category	Number of Discharges	Percent of Total	Diagnostic Category	Number of Discharges	Percent of Total
All Categories	30,747	100.0	All Categories	48,916	100.0
Respiratory system diseases	5,523	18.0	Obstetric deliveries & complications of pregnancy & puerperium	14,365	29.4
Digestive system diseases	4,349	14.1	Respiratory system diseases	5,900	12.1
Injury & poisoning	4,155	13.5	Digestive system diseases	5,805	11.9
Circulatory system diseases	2,955	9.6	Genitourinary system diseases	3,563	7.3
Symptoms, signs & ill-defined conditions	2,656	8.6	Injury & poisoning	3,203	6.5
Mental disorders	2,254	7.3	Circulatory system diseases	3,090	6.3
Endocrine, nutritional & metabolic disorders	1,761	5.7	Symptoms, signs & ill-defined conditions	3,065	6.3
Skin & subcutaneous tissue diseases	1,700	5.5	Endocrine, nutritional & metabolic disorders	1,972	4.0
Genitourinary system diseases	998	3.2	Skin & subcutaneous tissue diseases	1,447	3.0
Musculoskeletal system & connective tissue diseases	989	3.2	Mental disorders	1,310	2.7
All other	3,407	11.1	All other	5,196	10.6

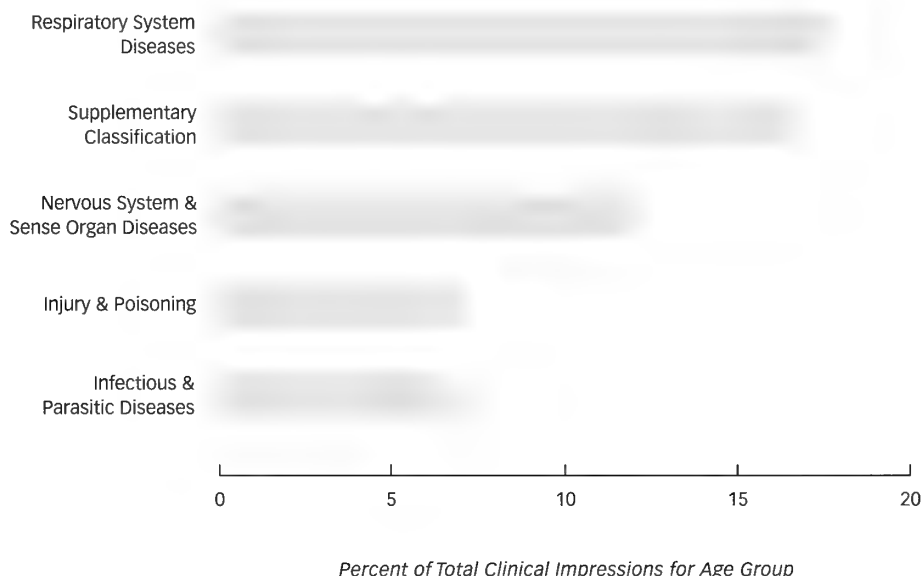
**Sources:** IHS and Tribal Direct: On-request Report 21

IHS and Tribal Contract: On-request Report 19

## CHART 42

### Leading Causes of Ambulatory Medical Visits: Ages 5 to 14 Years, FY 1997

Injury and poisoning is the fourth leading cause of ambulatory medical visits for Indian patients, 5 to 14 years of age. Seven percent of all visits for this Indian age group pertain to injury and poisoning.



## TABLE 42

Ten Leading Causes of Ambulatory Medical Clinical Impressions for Patients 5 to 14 Years of Age  
Indian Health Service and Tribal Direct and Contract Facilities, FY 1997

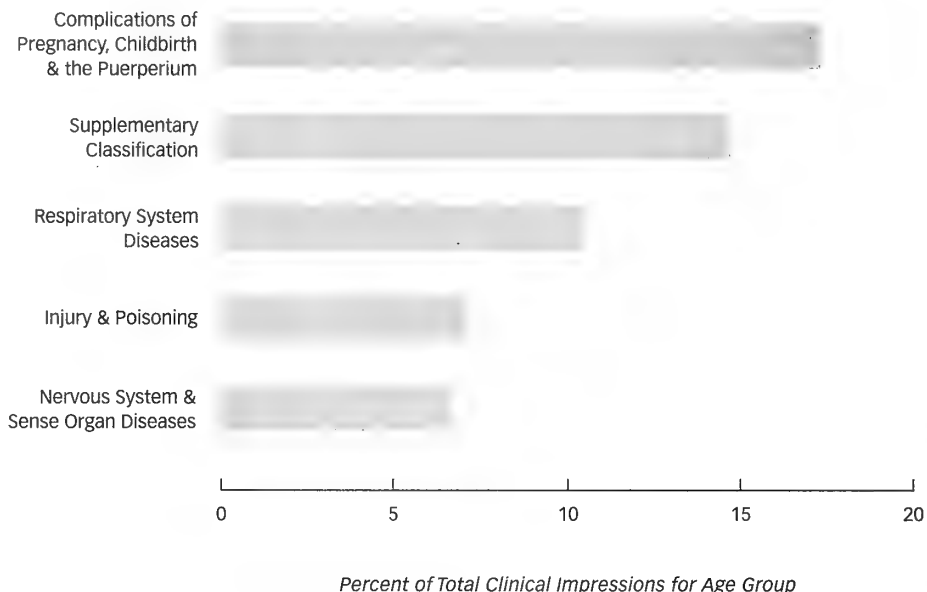
Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	999,158	494,606	504,552	100.0	49.5	50.5
				100.0	100.0	100.0
Respiratory system diseases	175,630	85,005	90,625	17.6	17.2	18.0
Supplementary classification	168,884	85,675	83,209	16.9	17.3	16.5
Nervous system & sense organ diseases	119,943	56,980	62,963	12.0	11.5	12.5
Injury & poisoning	70,410	40,061	30,349	7.0	8.1	6.0
Infectious & parasitic diseases	67,498	27,599	39,899	6.8	5.6	7.9
Skin & subcutaneous tissue diseases	61,469	30,091	31,378	6.2	6.1	6.2
Symptoms, signs & ill-defined conditions	46,983	22,090	24,893	4.7	4.5	4.9
Mental disorders	45,117	30,454	14,663	4.5	6.2	2.9
Musculoskeletal system diseases	15,292	7,174	8,118	1.5	1.5	1.6
Digestive system diseases	14,572	6,987	7,585	1.5	1.4	1.5
All other	213,360	102,490	110,870	21.4	20.7	22.0

Sources: Direct: Annual Report 1C  
Contract: Annual Report 3A

# CHART 43

## Leading Causes of Ambulatory Medical Visits: Ages 15 to 24 Years

Injury and poisoning is the fourth leading cause of ambulatory medical visits for Indian patients, 15 to 24 years of age. Seven percent of all visits for this Indian age group pertain to injury and poisoning.



# TABLE 43

Ten Leading Causes of Ambulatory Medical Clinical Impressions for Patients 15 to 24 Years of Age  
Indian Health Service and Tribal Direct and Contract Facilities, FY 1997

Diagnostic Category	Number of Discharges			Percent Distribution		
	Combined	Male	Female	Combined	Male	Female
All Categories	1,011,234	301,320	709,914	100.0	29.8	70.2
				100.0	100.0	100.0
Complications of pregnancy, childbirth & the puerperium	174,822	0	174,822	17.3	0.0	24.6
Supplementary classification	148,343	48,211	100,132	14.7	16.0	14.1
Respiratory system diseases	106,635	38,833	67,802	10.5	12.9	9.6
Injury & poisoning	71,328	41,306	30,022	7.1	13.7	4.2
Nervous system & sense organ diseases	67,224	25,942	41,282	6.6	8.6	5.8
Skin & subcutaneous tissue diseases	51,860	22,012	29,848	5.1	7.3	4.2
Symptoms, signs & ill-defined conditions	47,011	14,302	32,709	4.6	4.7	4.6
Genitourinary system disease	45,793	2,411	43,382	4.5	0.8	6.1
Mental disorders	41,736	20,180	21,556	4.1	6.7	3.0
Musculoskeletal system diseases	32,293	13,215	19,078	3.2	4.4	2.7
All other	224,189	74,908	149,281	22.2	24.9	21.0

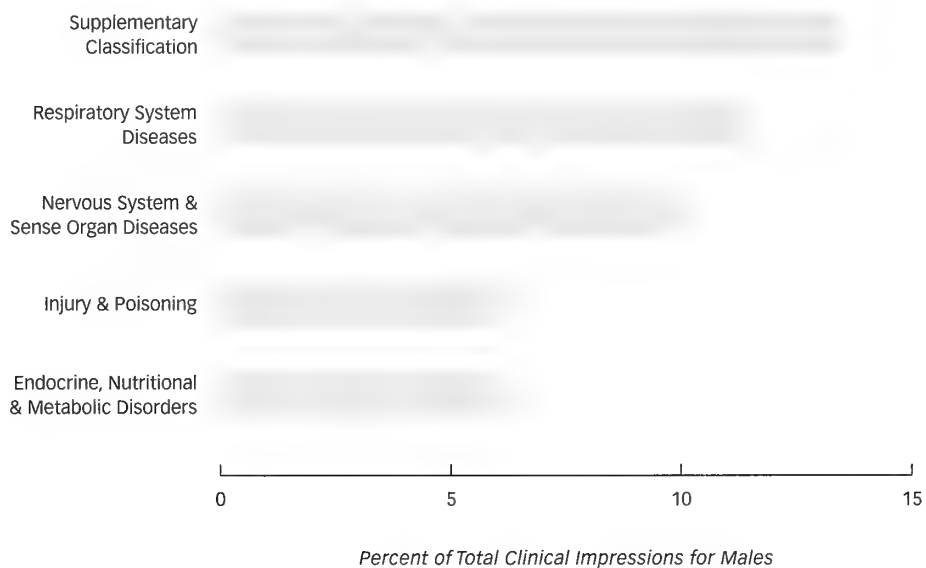
Sources: Direct: Annual Report 1C  
Contract: Annual Report 3A



## CHART 44

### Leading Causes of Ambulatory Medical Visits for Males, Indian Health Service and Tribal Direct and Contract Facilities, FY 1997

Injury and poisoning is the fourth leading cause of ambulatory medical visits for Indian male patients (all ages). Six percent of all Indian male visits pertain to injury and poisoning.



**TABLE 44****Number of Ambulatory Medical Clinical Impressions for Leading Major Categories by Sex**

Indian Health Service and Tribal Direct and Contract Facilities, FY 1997

MALE		FEMALE	
Category	Number of Clinical Impressions	Category	Number of Clinical Impressions
All Categories	2,969,025	All Categories	4,866,985
Supplementary classification	399,166	Supplementary classification	653,948
Respiratory system diseases	339,977	Respiratory system diseases	504,873
Nervous system & sense organ diseases	293,700	Nervous system & sense organ diseases	387,623
Injury & poisoning	184,578	Complication of pregnancy, childbirth & the puerperium	358,277
Endocrine, nutritional & metabolic disorders	183,020	Endocrine, nutritional & metabolic disorders	319,313
Circulatory system diseases	180,046	Symptoms, signs & ill-defined conditions	255,847
Skin & subcutaneous tissue diseases	149,514	Musculoskeletal system diseases	247,755
Symptoms, signs & ill-defined conditions	148,229	Genitourinary system diseases	221,253
Musculoskeletal system diseases	136,275	Circulatory system diseases	208,876
Mental disorders	133,870	Skin & subcutaneous tissue diseases	201,186
All other	820,650	All other	1,508,034

**Sources:** Direct: Annual Report 1C

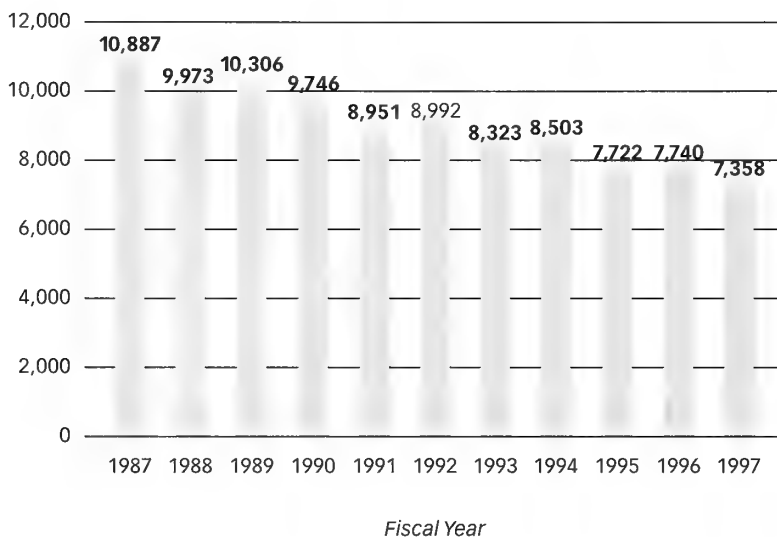
Contract: Annual Report 3A

## CHART 45

### Hospitalizations for Injuries and Poisonings

The number of discharges for injury and poisoning from IHS and Tribal direct and contract hospitals has been on the decline. In 1997, the number of such discharges were 68 percent of what they were in 1987.

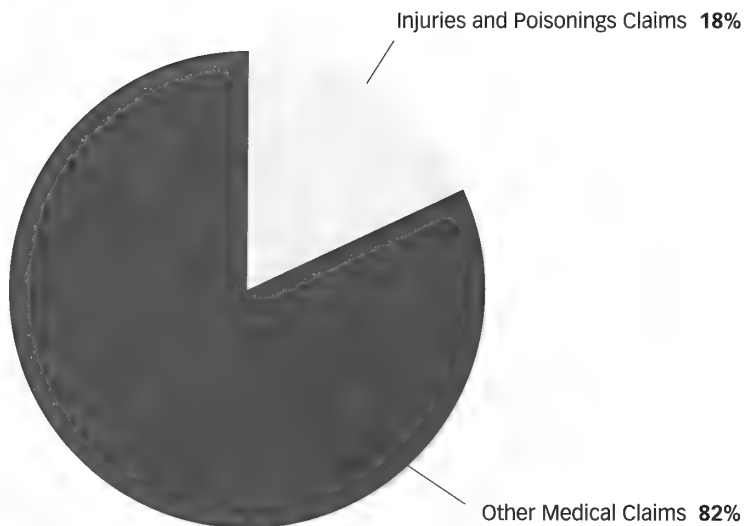
Discharges



## CHART 46

### Contract Health Services (CHS) Expenses Related to Injuries and Poisonings

Eighteen percent of the expenses for IHS-administered contract health services (CHS) during 1994-97 were associated with injuries and poisonings claims. For all inpatient claims, 17 percent related to injuries and poisonings. This percentage was 16 for outpatient claims.



**TABLE 46****Contract Health Services (CHS) Expenses Related to Injuries and Poisonings**

IHS Administered CHS, Fiscal Years 1994-1997

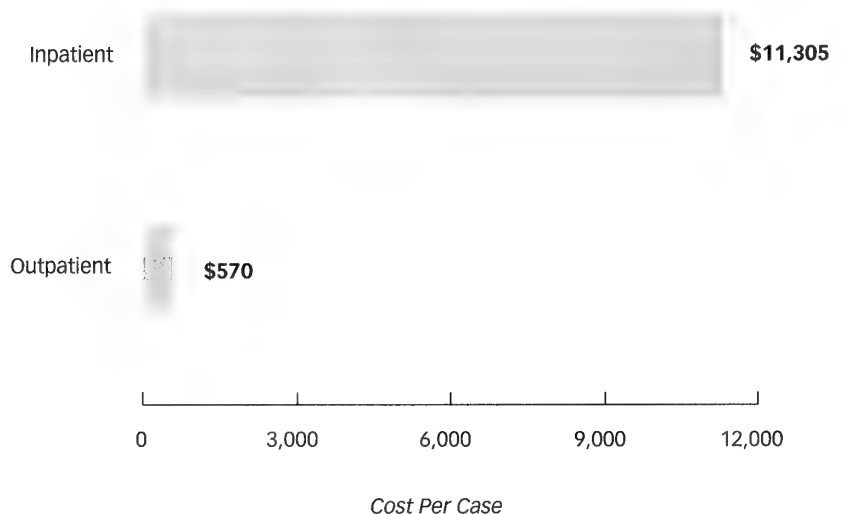
Type of Claim	Percent of Expenses		
	Total	Inpatient	Outpatient
Injuries and Poisonings	18	17	16
Other Medical	82	83	84

**Source:** Fiscal Intermediary Claim History Files for Purchase  
Order Fiscal Years 1994-97

**Note:** Injuries were identified by claims with a Primary Diagnosis as indicated by an ICD-9 Code between 800-999. External cause of Injury Codes (E Codes) were not considered.

**CHART 47****Contract Health Services (CHS) Cost per Injuries and Poisonings Case**

During 1994-97, the average cost of a CHS inpatient case for injuries and poisonings was \$11,305 and for an outpatient case was \$570. Outpatient claims outnumbered inpatient claims by a ratio of 6.4 to 1.



**TABLE 47**

**Contract Health Services (CHS) Cost Per Injuries and Poisonings Cases**

IHS Administered CHS, Fiscal Years 1994-1997

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Type of Service	Number of Cases	Total Cost	Cost Per Case
Inpatient	11,408	\$128,974,031	\$11,305
Outpatient	72,664	\$41,460,028	\$570

**Source:** Fiscal Intermediary Claim History Files for Purchase  
Order Fiscal Years 1994-97.

**Note:** Injuries were identified by claims with a Primary Diagnosis  
as indicated by an ICD-9 Code between 800-999.  
External cause of Injury Codes (E Codes) were not considered.



# Glossary of ICD-9 Codes

## List of 72 Selected Causes of Death (1979-Present)

Cause of Death	ICD-9 Codes
Shigellosis and amebiasis	004, 006
Certain other intestinal infections	007-009
Tuberculosis	010-018
Tuberculosis of respiratory system	010-012
Other tuberculosis	013-018
Whooping cough	033
Streptococcal sore throat, scarlatina, and erysipelas	034-035
Meningococcal infection	036
Septicemia	038
Acute poliomyelitis	045
Measles	055
Viral hepatitis	070
Syphilis	090-097
All other infectious and parasitic diseases	001-003, 005, 020-032, 037, 039-041, 042-044, 046-054, 056-066, 071-088, 098-139
Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues	140-208
Malignant neoplasms of lip, oral cavity, and pharynx	140-149
Malignant neoplasms of digestive organs and peritoneum	150-159
Malignant neoplasms of respiratory and intrathoracic organs	160-165
Malignant neoplasm of breast	174-175
Malignant neoplasms of genital organs	179-187
Malignant neoplasms of urinary organs	188-189
Malignant neoplasms of all other and unspecified sites	170-173, 190-199
Leukemia	204-208
Other malignant neoplasms of lymphatic and hematopoietic tissues	200-203
Benign neoplasms, carcinoma in situ, and neoplasms of uncertain behavior and of unspecified nature	210-239
Diabetes mellitus	250
Nutritional deficiencies	260-269
Anemias	280-285
Meningitis	320-322
Major cardiovascular diseases	390-448
Diseases of heart	390-398, 402, 404-429
Rheumatic fever and rheumatic heart disease	390-398
Hypertensive heart disease	402
Hypertensive heart and renal disease	404
Ischemic heart disease	410-414
Acute myocardial infarction	410
Other acute and subacute forms of ischemic heart disease	411
Angina pectoris	413
Old myocardial infarction and other forms of chronic ischemic heart disease	412, 414
Other diseases of endocardium	424
All other forms of heart disease	415-423, 425-429
Hypertension with or without renal disease	401, 403
Cerebrovascular diseases	430-438
Intracerebral and other intracranial hemorrhage	431-432
Cerebral thrombosis and unspecified occlusion of cerebral arteries	434.0, 434.9
Cerebral embolism	434.1
All other and late effects of cerebrovascular diseases	430, 433, 435-438

## Cause of Death

## ICD-9 Codes

Atherosclerosis	440
Other diseases of arteries, arterioles, and capillaries	441-448
Acute bronchitis and bronchiolitis	466
Pneumonia and influenza	480-487
Pneumonia	480-486
Influenza	487
Chronic obstructive pulmonary diseases and allied conditions	490-496
Bronchitis, chronic and unspecified	490-491
Emphysema	492
Asthma	493
Other chronic obstructive pulmonary diseases and allied conditions	494-496
Ulcer of stomach and duodenum	531-533
Appendicitis	540-543
Hernia of abdominal cavity and intestinal obstruction without mention of hernia	550-553, 560
Chronic liver disease and cirrhosis	571
Cholelithiasis and other disorders of gallbladder	574-575
Nephritis, nephrotic syndrome, and nephrosis	580-589
Acute glomerulonephritis and nephrotic syndrome	580-581
Chronic glomerulonephritis, nephritis and nephropathy, not specified as acute or chronic, and renal sclerosis, unspecified	582-583, 587
Renal failure, disorders resulting from impaired renal function, and small kidney of unknown cause	584-586, 588-589
Infections of kidney	590
Hyperplasia of prostate	600
Complications of pregnancy, childbirth, and the puerperium	630-676
Pregnancy with abortive outcome	630-638
Other complications of pregnancy, childbirth, and the puerperium	640-676
Congenital anomalies	740-759
Certain conditions originating in the perinatal period	760-779
Birth trauma, intrauterine hypoxia, birth asphyxia, and respiratory distress syndrome	767-769
Other conditions originating in the perinatal period	760-766, 770-779
Symptoms, signs, and ill-defined conditions	780-799
All other diseases	Residual
Accidents and adverse effects	E800-E949
Motor vehicle accidents	E810-E825
All other accidents and adverse effects	E800-E807, E826-E949
Suicide	E950-E959
Homicide and legal intervention	E960-E978
All other external causes	E980-E999

## List of 61 Selected Causes of Infant Death (1979-Present)

Certain intestinal infections	008-009
Whooping cough	033
Meningococcal infection	036
Septicemia	038
Viral diseases	045-079
Congenital syphilis	090
Remainder of infectious and parasitic diseases	001-007, 010-032, 034-035, 037, 039-041, 042-044, 080-088, 091-139
Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues	140-208
Benign neoplasms, carcinoma in situ, and neoplasms of uncertain behavior and of unspecified nature	210-239
Diseases of thymus gland	254
Cystic fibrosis	277.0
Diseases of blood and blood-forming organs	280-289
Meningitis	320-322



## Cause of Death

## ICD-9 Codes

Other diseases of nervous system and sense organs . . . . .	323-389
Acute upper respiratory infections . . . . .	460-465
Bronchitis and bronchiolitis . . . . .	466, 490-491
Pneumonia and influenza . . . . .	480-487
Pneumonia . . . . .	480-486
Influenza . . . . .	487
Remainder of diseases of respiratory system . . . . .	470-478, 492-519
Hernia of abdominal cavity and intestinal obstruction without mention of hernia . . . . .	550-553, 560
Gastritis, duodenitis, and noninfective enteritis and colitis . . . . .	535, 555-558
Remainder of diseases of digestive system . . . . .	520-534, 536-543, 562-579
Congenital anomalies . . . . .	740-759
Anencephalus and similar anomalies . . . . .	740
Spina bifida . . . . .	741
Congenital hydrocephalus . . . . .	742.3
Other congenital anomalies of central nervous system and eye . . . . .	742.0-742.2, 742.4-742.9, 743
Congenital anomalies of heart . . . . .	745-746
Other congenital anomalies of circulatory system . . . . .	747
Congenital anomalies of respiratory system . . . . .	748
Congenital anomalies of digestive system . . . . .	749-751
Congenital anomalies of genitourinary system . . . . .	752-753
Congenital anomalies of musculoskeletal system . . . . .	754-756
Down's syndrome . . . . .	758.0
Other chromosomal anomalies . . . . .	758.1-758.9
All other and unspecified congenital anomalies . . . . .	744, 757, 759
Certain conditions originating in the perinatal period . . . . .	760-779
Newborn affected by maternal conditions which may be unrelated to present pregnancy . . . . .	760
Newborn affected by maternal complications of pregnancy . . . . .	761
Newborn affected by complications of placenta, cord, and membranes . . . . .	762
Newborn affected by other complications of labor and delivery . . . . .	763
Slow fetal growth and fetal malnutrition . . . . .	764
Disorders relating to short gestation and unspecified low birthweight . . . . .	765
Disorders relating to long gestation and high birthweight . . . . .	766
Birth trauma . . . . .	767
Intrauterine hypoxia and birth asphyxia . . . . .	768
Fetal distress in liveborn infant . . . . .	768.2-768.4
Birth asphyxia . . . . .	768.5-768.9
Respiratory distress syndrome . . . . .	769
Other respiratory conditions of newborn . . . . .	770
Infections specific to the perinatal period . . . . .	771
Neonatal hemorrhage . . . . .	772
Hemolytic disease of newborn, due to isoimmunization, and other perinatal jaundice . . . . .	773-774
Syndrome of "infant of a diabetic mother" and neonatal diabetes mellitus . . . . .	775.0-775.1
Hemorrhagic disease of newborn . . . . .	776.0
All other and ill-defined conditions originating in the perinatal period . . . . .	775.2-775.9, 776.1-779
Symptoms, signs, and ill-defined conditions . . . . .	780-799
Sudden infant death syndrome . . . . .	798.0
Symptoms, signs, and all other ill-defined conditions . . . . .	780-797, 798.1-799
Accidents and adverse effects . . . . .	E800-E949
Inhalation and ingestion of food or other object causing obstruction of respiratory tract or suffocation . . . . .	E911-E912
Accidental mechanical suffocation . . . . .	E913
Other accidental causes and adverse effects . . . . .	E800-E910, E914-E949
Homicide . . . . .	E960-E969
Child battering and other maltreatment . . . . .	E967
Other homicide . . . . .	E960-E966, E968-E969
All other causes . . . . .	Residual



## Additional Causes of Death and Their Corresponding ICD-9 Codes Which May Be Found in This Publication

*(These categories are not included as part of the 72 cause of death or 61 cause of infant death lists.*

*They are independent of these two lists but are valid cause of death codes to use for the causes indicated)*

### Cause of Death

### ICD-9 Codes

Alcoholism deaths	291, 303, 305.0, 357.5, 425.5, 535.3, 571.0-571.3, 790.3, E860
Alzheimer's disease deaths	331.0
Breast cancer (females)	174
Cervical cancer	180
Colon-rectal cancer	153.0-154.3, 154.8, 159.0
Drug related deaths	292, 304, 305.2-305.9, E850-E858, E950.0-E950.5, E962.0, E980.0-E980.5
Gastroenteric deaths	004, 006-009, 535, 555-556, 558, 562
Human immunodeficiency virus (HIV) infection	042-044
Injury by firearms	E922, E955.0-E955.4, E965.0-E965.4, E970, E985.0-E985.4
Injury and poisoning	E800-E807, E810-E825, E826-E949, E950-E959, E960-E978, E980-E989, E990-E999
Other injuries	E980-E989, E990-E999
Lung cancer	162.2-162.9
Maternal deaths	630-676
Prostate cancer	185

## List of ICD-9 Codes Used in Patient Care Charts and Tables

### Diagnostic Category

### ICD-9 Codes

Infectious and parasitic diseases	001-139
Neoplasms	140-239
Endocrine, nutritional, and metabolic diseases and immunity disorders	240-279
Diseases of the blood and blood-forming organs	280-289
Mental disorders	290-319
Diseases of the nervous system and sense organs	320-389
Diseases of the circulatory system	390-459
Diseases of the respiratory system	460-519
Diseases of the digestive system	520-579
Diseases of the genitourinary system	580-629
Complications of pregnancy, childbirth, and the puerperium	630-676
Diseases of the skin and subcutaneous tissue	680-709
Diseases of the musculoskeletal system and connective tissue	710-739
Congenital anomalies	740-759
Certain conditions originating in the perinatal period	760-779
Symptoms, signs, and ill-defined conditions	780-799
Injury and poisoning	E800-E999
Supplementary classification (classification of factors influencing health status and contact with health service)	V01-V99

# Method Used to Rank Leading Sites of Cancer Deaths

## Site of Cancer Death

## ICD-9 Codes

*The causes designated by the symbol # were ranked to designate the leading sites of cancer deaths*

Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues	140-208
Malignant neoplasms of lip, oral cavity, and pharynx	140-149
# of lip	140
# of tongue	141
# of pharynx	146-149.0
of other and ill-defined sites within the lip, oral cavity, and pharynx	142-145, 149.1-149.9
Malignant neoplasms of digestive organs and peritoneum	150-159
# of esophagus	150
# of stomach	151
# of small intestine, including duodenum	152
# of colon	153
Hepatic and splenic flexures and transverse colon	153.0-153.1, 153.7
Descending colon	153.2
Sigmoid colon	153.3
# Cecum, appendix, and ascending colon	153.4-153.6
Other and colon, unspecified	153.8-153.9
# of rectum, rectosigmoid junction, and anus	154
# of liver and intrahepatic bile ducts	155
Liver, primary	155.0
Intrahepatic bile ducts	155.1
Liver, not specified as primary or secondary	155.2
# of gallbladder and extrahepatic bile ducts	156
# of pancreas	157
of retroperitoneum, peritoneum, and other and ill-defined sites	
within the digestive organs and peritoneum	158-159
Malignant neoplasms of respiratory and intrathoracic organs	160-165
# of larynx	161
# of trachea, bronchus, and lung	162
of all other and ill-defined sites within the respiratory system and	
intrathoracic organs	160, 163-165
Malignant neoplasms of bone, connective tissue, skin, and breast	170-175
# of bone and articular cartilage	170
# of connective and other soft tissue	171
# Melanoma of skin	172
Other malignant neoplasms of skin	173
# of female breast	174
# of male breast	175
Malignant neoplasms of genital organs	179-187
# of cervix uteri	180
of other parts of uterus	179, 181-182
# of ovary and other uterine adnexa	183
of other and unspecified female genital organs	184
# of prostate	185
# of testis	186
# of penis and other male genital organs	187

## Site of Cancer Death

## ICD-9 Codes

*The causes designated by the symbol # were ranked to designate the leading sites of cancer deaths*

Malignant neoplasms of urinary organs . . . . .	188-189
# of bladder . . . . .	188
# of kidney and other and unspecified urinary organs . . . . .	189
Malignant neoplasms of other and unspecified sites . . . . .	190-199
# of eye . . . . .	190
# of brain . . . . .	191
of other and unspecified parts of nervous system . . . . .	192
# of thyroid gland and other endocrine glands and related structures . . . . .	193-194
of all other and unspecified sites . . . . .	195-199
Malignant neoplasms of lymphatic and hematopoietic tissues . . . . .	200-208
# Lymphosarcoma and reticulosarcoma . . . . .	200
# Hodgkin's disease . . . . .	201
Other malignant neoplasms of lymphoid and histiocytic tissue . . . . .	202
# Multiple myeloma and immunoproliferative neoplasms . . . . .	203
# Leukemia . . . . .	204-208
Lymphoid leukemia . . . . .	204
Myeloid leukemia . . . . .	205
Monocytic leukemia . . . . .	206
Other and unspecified leukemia . . . . .	207-208









U.S. Department of Health and Human Services

**Indian Health Service**

Office of Public Health

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*Program Statistics Team*